
SCHOOL BUS DRIVER IMPROVEMENT PROGRAM

School Bus Operator's Manual



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of Alberta ■

School Bus Operator's Manual

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SERIES 1

School Bus Inspection and Maintenance

SERIES 1

School Bus Inspection and Maintenance

SERIES 1.1: Pre-trip Inspection

INTRODUCTION

The pre-trip inspection gets its name from the requirement to inspect the bus on a daily basis before operating it. There are reasons for conducting the inspection prior to moving the bus before each trip:

1. Each day, operators are responsible to ensure the bus is in safe operating condition. By completing the inspection, an operator can bring to their supervisor's attention defects that could prevent a breakdown, possibly even leading to a crash resulting in injuries.

It is important that the same inspection procedure be used each day, and problems recorded. Included in this module is a sample pre-trip checklist (*your carrier or board may have its own form*), and the less you deviate from it, the less likely you are to omit any items.

Making a written record of your bus's condition and submitting it to your supervisor will help to eliminate possible oversight or forgetfulness, resulting in substantial cost savings and reducing the possibility of injuries to you, your bus passengers or other road users.

2. It may be easier to spot some signs of trouble while the bus is still parked before beginning your route. For example, an oil leak would be more noticeable due to the pool of oil that would have accumulated on the ground under the bus while it was stationary for a period of time.

Note: *If your bus is equipped with updated equipment, or special equipment such as wheelchair tie-downs, lift/ramps or two-way radio communication devices, or any other items, you will need to add these items to your checklist.*

The daily pre-trip inspection can be divided into three basic parts:

1. Under the hood - engine compartment check.
2. Engine start-up and the interior inspection
 - check gauges with engine running
 - switches and interior lights check
 - general inspection of the interior.
3. The walk-around and exterior inspection
 - general inspection of the exterior
 - all lights and signals check.

Your course instructor will demonstrate the proper method of conducting the complete pre-trip inspection. The pre-trip inspection is also discussed on the following pages.

The on-the-road check will be discussed in series 1.2.

Much of the pre-trip inspection may seem self-evident to you, or you may wonder about the necessity of going through these steps daily. The time spent on pre-trip inspections does pay off.

Remember that operators have both a legal and moral responsibility to complete the inspection. By completing an inspection of the bus, it helps to reduce the chances of a breakdown or collision and minimizes the risks to you, your passengers and other road users.

UNDER THE HOOD

When approaching your bus, the operator already needs to assess the general condition of the bus. Complete an overall visual inspection of the bus, noting damage, fluid leaks under the bus, and general appearance. Check to see if the bus is leaning to one side or the other.

Open up the engine compartment and check the following:

Oil Level:

- should be above the line on the dipstick indicating “add”, but not over the line indicating “full”.

Level of Coolant in Radiator:

- should be to the mark on the radiator tank. If there is no mark on the tank, 2.5 cm from the filler neck is acceptable.

Fan Belts/Fan Blades:

- should not be frayed, badly worn, or twisted and should have 1.5 cm or less tension. Fan blades must be in good condition.

Hoses:

- no cracks or tears, all connections should be secure.

Wire Connections:

- all appear tight and secure. No exposed wiring.

Power Steering Fluid:

- should be $\frac{3}{4}$ full, no leaks, cap secure.

Windshield Washer Fluid:

- should be no less than $\frac{3}{4}$ full.

Battery (if under the hood):

- securely mounted, no corrosion around the battery terminals.

Inside Tire Area (wheel wells):

- check the tire walls, hub areas, brake lines, springs, and shocks for general appearance.

General Appearance:

- should not be any grease or oil spills or signs of coolant leakage.

Ensure that the hood is secured properly once the inspection is complete.

ENGINE START-UP AND INTERIOR INSPECTION

Remember your first task on boarding the bus every morning is an overview to make sure everything is in order.

Requiring more explanation is the functioning of the engine and various mechanical and electrical systems.

Turn the key to the ON position. Follow manufacturers’ start-up procedures, especially for cold weather start-ups. If the unit is equipped with glow plugs, wait for the light to go out before starting the engine.

Start the unit, confirm oil pressure and ensure no warning lights are on and gauges are reading correctly. All gauges must be functioning and giving “normal” readings otherwise you should not operate the bus.

Note: *Idle time should be kept to a minimum depending on weather conditions.*

Vacuum or Air Pressure Gauge (If equipped):

- indicates capacity to operate the brakes. Do not operate the bus until the “reserve” vacuum or air reaches the manufacturer’s minimum specifications
- excessive loss of pressure overnight can indicate a leak in the air system and must be reported to the appropriate supervisor immediately.

Oil Pressure Warning Light:

- this light may go on as the bus is being started, but should go off right after the engine starts, if it does not: turn the engine off immediately and report to appropriate supervisor.

Oil Pressure Gauge (instead of warning light):

- adequate pressure will vary according to the manufacturer's specifications
- if adequate pressure is not indicated, turn engine off immediately and report to appropriate supervisor.

Service Brake Warning Light:

- with a dual brake system, if this light comes on during a hard braking application, this could indicate that at least one of the brake systems is not operating properly. This must be reported to the appropriate supervisor immediately.

Alternator/Generator Warning Light:

- if this light remains on after the engine is running, it may indicate a malfunction with the charging system. Do not operate and report immediately to the appropriate supervisor.

Ammeter (instead of alternator/generator warning light):

- if it continues to show a discharge after the engine is running, do not operate and report immediately to your appropriate supervisor.

Water Temperature Gauge or Warning Light:

- this gauge shows the temperature of the coolant in the engine. If your bus has a gauge it should read "cool" or "warm"
- when it indicates "hot" or the warning light goes on, turn off the engine and report immediately to your appropriate supervisor.

Fuel Gauge

- it should indicate a safe margin of fuel for the day's operation, preferably operate out of the "top half" of the tank
- buses that have been converted for propane usage, may not have gauges that are giving an accurate reading. Operators must use kilometres traveled to determine their next fill-up. Follow your company's procedures.

Light Indicators:

- ensure the following indicators are operational:
 - hazard lights
 - alternately flashing lights (amber and red)
 - brake lights, tail lights, clearance lights, head lights (high and low beams).

Interior Emergency Equipment:

- emergency door opens easily and is accessible, and alarm system is working
- emergency windows opens easily, and alarm system is working
- roof hatch (if equipped) – visibly in good condition
- reflectors/approved warning devices are accessible and operational
- fire extinguisher is charged, secured and pin is in place
- first aid kit is full, secure and accessible.

Also ensure the following are operational, properly adjusted and accessible:

- interior dome lights and step well light
- step well is clean and clear of tripping hazards, handrail is secure
- windshield wipers and washer fluid
- steering (free-play)
- horn

- heaters/defrosters and fans (all speeds)
- foot brake/parking brake/clutch all are working properly. To check the park brake, place the bus in drive or appropriate gear, release your foot off of the foot brake and test under load (recommended at idling speed)

Note: For air brake systems, the parking brake will remain applied if the air pressure falls below 310-345 kDa (45-50 psi).

- side view mirrors, cross-over mirrors, rear view mirror
- seat backs and bottoms secure
- sun visor
- operator's window (opens and closes)
- operator's seat belt and seat
- housekeeping, operator's area (paperwork) seats and floor clean and free from damage and obstructions
- aisle is clear of obstructions, tripping hazards
- electric door opener (if equipped). Ensure the door opens and closes properly, also ensure the emergency door handle works properly.

Vehicle Documents:

- ensure all paperwork is in the bus: registration form, operating authority, insurance certificate, and the Commercial Vehicle Inspection Permit.

GENERAL INSPECTION OF THE EXTERIOR

Windshield, Mirrors, Windows, Door:

- all school bus windows should be clean so as not to impair the operator's vision
- be sure all road film, dirt, snow, and ice are removed as they can cause a dangerous glare making it difficult to see properly
- mirrors should be clean and properly adjusted

- in the winter, in a safe location, recheck the rear of your bus as required and remove any snow that may have blown off the roof or any mud that may be obscuring windows, lights or signals
- check rear emergency door for ease of opening from the outside, and alarm system is working.

Battery (if on outside):

- securely mounted, no corrosion around the battery terminals, tray must be secured, and the door must be secured after closing.

Tires:

- look for under-inflated, flat, excessively worn or damaged tires. Don't drive until repaired or corrected. One flat rear tire, for example, can place a dangerous weight on the companion tire of a dual set
- tap each tire with a tire iron or similar implement. The blow should sound deep and hollow on both tires.

Wheels:

- look for loose or missing lug nuts, cracked rims, or rust, or fluid coming from the seal
- a solid seal of dust between the nut and the wheel is a good indication that the nut is secure. Check for any wear (silvering) or gaps around the lug nut. If this is present, it indicates movement. Do not drive with a loose or damaged lug nut
- be sure to check for any foreign objects between the duals.

Under the Bus:

- carefully view the ground under the bus and on the inner walls of the tires for indications of fluid leaks, or damage
- leaks could include engine oil, fuel, water, coolant, brake fluid, transmission fluid, power steering fluid, clutch or axle fluids or grease

- notify the appropriate supervisor if a leak is spotted
- check drive shaft for any visible damage

Exhaust System:

- look carefully for loose exhaust pipes, tailpipes, or muffler(s)
- look for visible exhaust and listen for excessive noise indicating a leak
- leaks should be reported immediately due to the danger of carbon monoxide poisoning.

General Outside Appearance:

- visually inspect for damage and vandalism and report immediately to the appropriate supervisor
- licence plate/licence plate light/licence plate validation sticker
- emergency exit signs are clearly marked
- crossing gate (if equipped): ensure the crossing gate is operational.

Propane Powered Buses (if equipped):

- under the hood, check that none of the hoses are rubbing on anything or resting on something hot
- check that all vaporizer hoses are on and in good condition
- on the exterior, ensure the tank's mounting brackets are tight and not cracked, ensure the dust cap is on and secure, check the liquid service shut off valve to ensure it is not seized.

Exterior Lights & Signals:

- all exterior lights; hazards, turn signals (left and right), clearance lights, brake lights, tail lights, and alternately flashing red lights.

Note: *You may choose to check some of these lights on the interior inspection. What is important is that at some point during the interior or exterior inspection, they are checked.*

CHILD CHECK-MATE SYSTEM / NO CHILD LEFT BEHIND SYSTEM (If equipped)

When the Child Check-Mate System is engaged, an operator must disengage the system before exiting the bus at the parking location. This will require the operator to walk through the bus one last time, looking for articles left behind and passengers.

Note: *This does not take the place of an operator walking through the bus to place the empty sign up in the window at any point prior to the bus being parked at the end of the run.*

COMMERCIAL VEHICLE SAFETY REGULATION AR 121/2009

Daily trip inspection requirements

10(1) *In this section, "commercial vehicle" means*

- a commercial vehicle or a combination of commercial vehicles that has a registered gross weight of more than, or that weighs more than, 4500 kilograms and that is not a bus, or*
- a bus.*

(2) *Unless otherwise provided in this Regulation, an owner or a carrier shall not permit a driver to drive, and a driver shall not drive, a commercial vehicle unless*

- the commercial vehicle has been inspected in accordance with the daily trip inspection requirements set out in this section, and*
- no major defect was detected in the vehicle during the daily trip inspection referred to in clause (a).*

(3) *A daily trip inspection is valid for 24 hours from the time recorded in the trip inspection report.*

(4) *Subject to subsection (10), the driver, the owner, the carrier or the person authorized by the carrier or the owner to conduct a daily trip inspection under this section shall inspect the operating condition,*

- with respect to a bus, of the items specified in Schedule 2 of NSC Standard 13, Part 2.*

SCHOOL BUS OPERATOR'S PRE-TRIP CHECKLIST

School Bus Daily Trip Inspection Checklist

Carrier Name _____

Driver's Name (print) _____ Date _____ Time _____

Location _____ Unit # _____ Odometer Reading _____

✓ - No defects X - Defects found; provide explanation at the bottom of the form as required

1 Under the Hood

- Fluid leaks (on the ground)
- Wires, hoses
- Fan blades/belts
- Fluid levels; oil, coolant, windshield washer, power steering, brake
- Battery (if under the hood)
- Inside tire area; brake lines, inside tire walls, leaf springs, shocks
- General appearance

2 Engine Start-Up

- All gauges and warning lights
- Fuel level (compare with km traveled)
- Wipers and washer fluid
- Defrosters, fans, and heaters, individually on all speeds
- Horn
- Steering
- Interior lights/step-well light
- Parking brake, service brake
- If equipped with air brakes, check the low air warning system, air pressure build-up rate, air loss rate and push rod stroke

3 Inside the Bus

- Turn signal indicators work on dash
- All emergency exits open and close properly, roof hatch is in good condition, alarm system is working
- Operator's window opens
- Entrance door operation
- Interior seats (backs and bottoms are secure)
- Emergency equipment; first aid kit, fire extinguisher and approved warning devices are secure, operational and unobstructed
- Vehicle documents
- All mirrors are properly adjusted, seat adjustment, seat belt works properly and are in good condition
- Tie down straps for mobility aids

4 Outside the Bus

- Headlights (high and low beam)
- Turn signals (front, sides and rear)
- Clearance/marker lights, reflectors and alternately flashing red and amber lights
- Hazard lights
- Antenna
- Battery (if outside)
- Crossing gate (if equipped)
- Stop arm
- Brake lights, tail lights, licence plate, licence plate light, licence plate validation sticker
- Tires, wheels and rims, lug nuts, objects lodged between duals, inside tire walls and hub oil level if equipped
- Coupling devices if equipped
- Exhaust and tailpipe
- Drive shaft
- Body damage
- Rear emergency door opens and closes properly
- Fuel filler cap/tank
- All windows and mirrors for cleanliness and damage
- General cleanliness/appearance, all lights, signs are clean and no damage
- Under the bus for leaks, suspension, shocks, fuel tank for leakage, air tanks and vacuum tanks if equipped
- If equipped with air brakes, listen for audible air leaks

5 Final Checklist

- Fasten seat belt
- Recheck all gauges
- Holding ability of the park brake
- Brakes and clutch – check by driving forward and stopping. Check the steering wheel for excessive slack and play by rocking the steering wheel back and forth
- Check both signal indicators on the inside dash to ensure they are lit and working properly

Note: Specialized equipment such as a wheelchair lift, wheelchair tie down equipment, strobe lights etc need to be

Further information on defects found:

The vehicle identified on this report has been inspected in accordance with NSC Standard 13, Schedule 2 requirements. A Daily Trip Inspection is valid for 24 hours and must be produced to a Peace Office upon demand.

Driver's Signature _____

- Above defects need not be corrected for safe operation of the vehicle
- Defects corrected

Mechanic's Signature _____

Date _____

SERIES 1.1: PRE-TRIP INSPECTION**REVIEW WORKSHEET**

1. A driver will complete the pre-trip inspection in the position the vehicle was last parked in. What is the reason for doing so?
 2. When should a driver add oil?
 3. The pre-trip inspection can be thought of as three basic parts. They are:
 4. Name four items to be checked for the on-road checking procedures:
 5. List five items to be checked during a pre-trip inspection:
 6. The driver notices that the service brake warning light remains on after the bus is started. The driver should:
- Scenario:**
A driver completing a pre-trip inspection notices that both tail lights are out. What does the driver need to do?

SERIES 1.2: On The Road

ON THE ROAD CHECKING PROCEDURES

A planned on-the-road check will give you a chance to evaluate the steering, suspension, clutch, transmission, and other components. You can also determine whether the engine performs properly under load, and if the brakes provide you with adequate stopping power.

The following is a suggested procedure for road checking the vehicle and the signs of trouble to which you should be alert (prior to leaving the yard)

Check the Brakes:

- don't wait until you are on the highway to check the brakes. Test them at low speeds, bringing the bus to a complete stop. Your bus should stop in a straight line without pulling to either right or left or skidding
- the brakes should not grab or lock or make excessive noise. Report any excessive pedal pressure required or unusual braking behaviour to the appropriate supervisor immediately
- if the condition prevents safe braking, do not operate
- monitor the warning system to ensure that adequate pressure is maintained.

Check Transmission Operation:

- with the transmission engaged in either a forward or reverse gear, the bus should start out smoothly in response to depressing the accelerator and the transmission should not produce any unusual metallic noises
- an automatic transmission should not "slip" and a manual transmission should allow for easy, smooth gear changes throughout the entire shifting range

- you may not be aware of "slipping" but report any difficulty in shifting gears to the appropriate supervisor.

Note: *Do not exceed the manufacturer's recommended road speed for each specific gear range. Exceeding speed recommendations could damage the transmission or reduce its service life.*

Check the Clutch:

- the clutch should engage easily and smoothly without jerking, slipping excessively or "chattering"
- a properly adjusted clutch should have some "free play" (refer to manufacturer's recommendations) when pedal is fully released
- report any unusual clutch pedal operation to the appropriate supervisor
- never "ride" the clutch pedal. Once the shift has been made, your foot should be removed from the clutch pedal and placed flat on the floor
- when changing gears, carefully control the speed of the engine so that the shift may be completed without jerking or excessive slippage
- erratic or careless shifting of gears wears out the clutch and reduces service life.

Check the Engine:

- be aware of any unusual engine noise, vibrations, or lack of normal response. Report any concerns to the appropriate supervisor
- never "race" a cold engine. Increase speed slowly so that all parts may be properly lubricated. In colder weather, the bus should idle for about 10 minutes before first starting out on your route.

Check the Steering:

- is it responsive?
- does there appear to be excessive “play” or “jerking?”
- is the power steering quiet?
- does the bus steer easily?
- does it go precisely where you steer it?
- is steering steady in turning and over bumps?

Report any unusual or substandard steering conditions immediately to the appropriate supervisor.

Check the Suspension:

- does the bus lean to one side?
- is there excessive bounce or does the bus bottom out when going over bumps or pot-holes?
- does it weave or sway excessively when turning corners or curves? If this occurs, it may be due to broken springs or faulty shock absorbers
- report any concerns to the appropriate supervisor.

A professional school bus operator is always alert to the condition of the bus while driving and recognizes unusual noises or abnormal handling characteristics and insures that they are reported to the appropriate supervisor.

SHIFTING GEARS, ACCELERATING AND DECELERATING**Standard Transmission**

1. Familiarize yourself with the gear pattern by checking the chart on the gear shift lever or the dash. Check to determine the starting gear recommended under normal circumstances for the bus you are driving.
2. Depress the clutch pedal.
3. Shift into the appropriate gear.
4. Depress the foot brake.
5. Release the park brake.
6. Release the clutch to the friction point.
7. Remove foot from the brake pedal, place it on the accelerator pedal and accelerate gradually.
8. Remove your left foot from the clutch slowly and completely place it on the floor while continuing to accelerate. Do not ride the clutch!
9. Accelerate the bus to the proper engine speed before attempting to shift into the next higher gear. This will prevent the engine from lugging. With practice, you will learn to feel and hear the proper engine speed for shifting.
10. When appropriate to shift gears, first depress the clutch pedal and release accelerator simultaneously.
11. Shift into the next gear.
12. Smoothly release the clutch and continue to accelerate appropriate to conditions.

When downshifting a standard transmission, the procedures are very similar.

When downshifting from cruising speed, reduce speed, then:

1. Depress the clutch and release the accelerator.
2. Shift to the next lower gear.
3. Release the clutch smoothly and use the accelerator to provide engine power appropriate to the terrain you are travelling on.
4. Repeat these steps to continue downshifting as the proper engine speeds are reached.

5. To bring the bus to a complete stop, apply the brake, gradually increasing pressure, and depress the clutch after reducing speed to between 8-16 km/h.
6. If you are parking the bus to leave it: set the parking brake, follow the shut down procedures, select the appropriate gear, and secure the bus.

Additional Points On Shifting:

- if you release the clutch too quickly, you will likely stall the engine
- racing the engine and not releasing the clutch quickly enough will cause the clutch to slip excessively
- normally, you should avoid skipping gears while upshifting or downshifting, as this can cause undue engine and clutch wear
- shifting should always be done at proper engine speeds
- holding the vehicle in too low a gear while the engine races, causes excessive wear on an engine. Similarly, shifting before the proper engine speed is reached causes the engine to lug which can be just as hard on the engine
- it is important to completely remove your left foot from the clutch when not actually shifting gears. Riding the clutch will quickly wear out a clutch.

Note: *It is also not proper to depress the clutch at too high a speed and then keep it depressed while braking to a stop. This is called “coasting to a stop”. Always use the appropriate gears when downshifting to a stop.*

Double Clutching:

Double clutching is a procedure where you depress the clutch pedal, release it and depress it again while shifting gears. On non-synchromesh transmissions, double clutching makes shifting gears smoother because it co-ordinates the engine speed and the transmission speed, aligning the gears for easier shifting. During the actual shift, (when the bus is out of gear) re-clutching and revving the engine will, in most cases, prevent excessive gear grinding.

Upshifting By Double Clutching

1. Depress clutch pedal and release accelerator simultaneously.
2. Shift gear lever to neutral position.
3. Release clutch pedal momentarily.
4. Depress clutch pedal and shift to next higher gear.
5. Release clutch pedal and accelerate engine at the same time.

Downshifting By Double Clutching

1. Depress the clutch pedal and release accelerator simultaneously.
2. Shift gear lever to neutral position.
3. Release clutch pedal momentarily to engage clutch and accelerate engine to more than original speed.
4. Depress clutch pedal and shift to next lower gear.
5. Release clutch pedal gradually and accelerate engine to match the speed of the vehicle.

By learning and practicing the correct procedures for shifting, accelerating and decelerating, a professional operator can save countless dollars on the wear and tear of an engine and clutch as well as providing your passengers with a smoother ride.

Automatic Transmission

Shifting gears and accelerating:

1. Depress the brake pedal.
2. Move gear selector lever into appropriate position.
3. Release parking brake.
4. Release brake pedal and smoothly depress accelerator.
5. As speed increases, the transmission will automatically shift into the next higher gear.

If you require additional power to accelerate quickly, depress the accelerator firmly to the floor. This will cause the automatic transmission to downshift giving you more power to accelerate. After reaching a suitable speed, the transmission will once again shift up automatically to the next gear.

Occasionally, due to difficult terrain, you may wish to drive in a lower gear for more engine power. This may, in certain circumstances, give better traction and assist in reducing tire spin. This can be accomplished by simply moving the gear selector to a lower position.

SERIES 1.2: ON THE ROAD

REVIEW WORKSHEET

1. List the six items that are checked while on the road:
2. When checking the brakes, at what speed should they be checked, and where?
3. When operating a school bus with a standard transmission, what should the driver do with their foot once the clutch has been released?
4. Using lower gears with an automatic transmission will:
5. What are the benefits of a driver who learns and practices the correct procedures for shifting, accelerating, and decelerating?

SERIES 1.3: General Maintenance Tasks

INTRODUCTION

When carrying a large number of energetic passengers twice a day, five days a week during the school year, it is understandable that a school bus suffers a great deal of wear and tear. Consequently, in addition to conducting pre-trip inspections and on-road checks, a good overall maintenance program must include the performance of daily maintenance tasks by the operator(s).

CLEANLINESS

There are several important reasons why it is necessary to keep your school bus clean inside and out:

- the number one priority is safety!
- to safe-guard the health of all passengers at all times
- to reduce the possibility of injuries to passengers caused by them falling over objects or slipping on the floor
- a clean bus creates a better attitude among the passengers. If the operator takes pride in keeping a bus clean, the passengers are more likely to respond in the same positive manner
- a clean bus gives the public a positive image of the school system, the bus operator and the bus company.

Follow the daily maintenance procedures and requirements adopted by your carrier and school jurisdiction.

POST-TRIP MAINTENANCE TASKS

It is a **MUST** that you check for passengers left on board the bus as follows:

- a.m.; at last school drop-off location
- p.m.; at last stop in rural areas, and in urban areas somewhere after the last drop-off location, but not at that location

Note: *The reason why we do not recommend that the operator go through the bus checking for passengers or articles at the last stop is to prevent passengers from coming back to the bus. Once a passenger is off the bus, they should be instructed not to return to the bus for any reason.*

For units equipped with the “No Child Left Behind” or Child Check-mate System” complete the following:

- Once back at the yard or your park-out location, the operator will walk through the bus one more time, checking for articles left behind and passengers.
- This is also the time the operator will deactivate the Child Check-mate System if it is equipped on that unit.

After having completed your daily run, there are a few items you should do that will ensure the bus is maintained in a clean, sanitary and operational condition:

- check the inside of the bus for forgotten articles such as books, lunches and clothing and store them to be returned to their owners
- check the fuel supply – **It is important to remember to never fuel a school bus with any passengers on board**

- sweep the floor of the bus, being especially careful to sweep any water out of the bus in the winter to prevent it from freezing and creating a slippery area where passengers could hurt themselves
- sweep off the steps of the bus and remove any ice buildup from the stairwell
- check the interior seats for any damage or vandalism and report these to the appropriate supervisor immediately
- check that all electrical switches are turned off to prevent running down the battery
- conduct a quick exterior walk-around to check for items in need of repair, ensure all lights are off, no visible leaks or damage.

Note: *There is some overlap here with part of the interior pre-trip inspection. If you do a thorough job in the afternoon, it pays off the next day by making your pre-trip inspection easier.*

The performance of these tasks along with the pre-trip inspection and on-road check every day is fundamental to the safety of all passengers and the overall maintenance of the vehicle.

These checks may seem like a lot of extra work at first to a new operator, however, once the operator has done them a few times, they become just a normal part of the daily routine.

FUELLING PROCEDURES

In some school jurisdictions the school bus operator may be required to fuel the bus.

NEVER FUEL A BUS WITH STUDENTS ONBOARD

The three common types of fuel that school buses use are gas, diesel, and propane.

Remember that each of these has to be handled with care and safety. As a school bus operator it is up to you to make sure that you understand your local policies and procedures for fueling.

Gasoline/Diesel

- do not dispense fuel into the fuel tank while the engine is running
- never overfill the fuel tank
- in the event of a minor spill, immediately apply an accepted absorbent material
- in the event of a major fuel spill, notify the proper person/agency (refer to local policies)
- do not dispense fuel in close proximity to electrical sparks or open flame and **DO NOT SMOKE.**

Propane

Ensure that:

- only personnel with proper certification or training refuel a propane powered school bus
- there are no ignition sources within three metres (10 feet) of the dispenser or container being filled
- protective gloves and proper clothing are being worn (i.e. long-sleeve shirts)
- engine and electrical accessories are switched off
- **NO ONE IS SMOKING**
- attach the filling hose to fill connection of vehicle fuel tank
- open the fixed-liquid level gauge (bleeder valve)
- when liquid level reaches maximum permitted in the tank, liquid propane in the form of a mist will be discharged from the liquid level gauge. Fuelling should now be terminated
- the fixed level gauge must be shut off and fill-line disconnected

- the magnetic float gauge attached to the tank should indicate the tank is now filled to capacity (total capacity of the tank is approximately 80 per cent).

CARRIER RESPONSIBILITIES

National Safety Code

Maintenance and Inspection Program

A carrier shall have a maintenance and inspection program that pertains to all of their commercial vehicles and shall carry out the program according to its terms. The maintenance and inspection program must be in writing and provide for the ongoing inspection, maintenance and repair of the carrier's school buses.

Records

A carrier shall maintain, or cause to be maintained, the following records pertaining to each bus used in their business:

- an identification of the vehicle, including:
 - a unit number assigned to the vehicle by the carrier, or where no such number has been assigned, the manufacturer's serial number or similar identifying mark
 - the make of the vehicle
 - the year of manufacture
 - the size of the tires with which the vehicle is equipped
- the name of the person furnishing the vehicle, if the carrier is not the registered owner of the vehicle
- a record of the inspection, repairs, lubrication, and maintenance for the vehicle, including:
 - the nature of the inspection or work performed on the vehicle
 - the date on which that inspection or work took place and the odometer reading on the vehicle at that time

- modifications to the vehicle involving axles, or suspensions, that affect the gross vehicle weight rating or the gross axle weight rating determined by the manufacturer of the vehicle
- notices of defects received from the vehicle manufacturer and the corrective work done on the vehicle in relation to those notices.

Maintenance of Records

The records that were just discussed, must:

- be retained for at least five years from when they were created, established or received
- be located at or made available through the carrier's main place of business in Alberta
- the operator must maintain all forms required and submit them to the carrier
- the operator must ensure that all pre-trip paperwork is completed.

SERIES 1.3: GENERAL MAINTENANCE TASKS

REVIEW WORKSHEET

1. In addition to conducting a pre-trip inspection and operating checks, a good overall maintenance inspection program must include:
2. List two reasons for maintaining a clean bus.
3. When completing the post-trip, it is imperative that this is completed as follows:
4. What is the reason for not checking for students at the last stop in an urban area?
5. Once an operator is back at the yard or their park-out location, the driver should:
6. How long does a carrier need to retain the record for a school bus?

SERIES 1 – GLOSSARY OF TERMS

Term	Definition
Brake Lamps (stop lights; brake lights)	<ul style="list-style-type: none"> – red lamps on the rear that indicate stopping action by the driver – must light up when the service brake is applied and be clearly visible from at least 250 metres
Bus Body	<ul style="list-style-type: none"> – the “passenger” portion of the bus built by an OEM such as Thomas, Corbeil, Blue Bird, IC
Chassis	<ul style="list-style-type: none"> – the “running” portion of the bus built by an OEM such as Ford, General Motors, International, etc.
Clearance Lamps	<ul style="list-style-type: none"> – front (amber) and rear (red) lamps mounted as high as practicable to indication
Conventional Bus	<ul style="list-style-type: none"> – service door is behind the front wheels – common style of school bus with the entire engine in front of the windshield
Cut Away Bus	<ul style="list-style-type: none"> – vehicle with a school bus body constructed upon a cutaway front section vehicle from an OEM chassis – supplied with a left side driver’s door – service door is behind front wheels
Cut Away Bus – dual rear wheel (Bussette; Fat Albert)	<ul style="list-style-type: none"> – see “Cut Away Bus” above – dual rear wheel chassis
Cut Away Bus – single rear wheel (school bus van)	<ul style="list-style-type: none"> – see “Cut Away Bus” above – single rear wheel chassis
CVIP Inspection (semi annual inspection)	<ul style="list-style-type: none"> – provincial inspection conducted by a certified repair shop at six month intervals
CVSA Inspection (roadside inspection)	<ul style="list-style-type: none"> – vehicle inspections conducted by an enforcement agency
D250 Standard	<ul style="list-style-type: none"> – Canadian Standards Association (CSA) recommendations for school bus construction in Canada
Daytime Running Lamps (running lights)	<ul style="list-style-type: none"> – headlamps and exterior lamps that are lit automatically when the vehicle is running
Dual Rear Wheel (DRW)	<ul style="list-style-type: none"> – two tires at each of the rear wheel positions
Exit Lamp	<ul style="list-style-type: none"> – New in 2007: lamp mounted above the passenger door that projects white light along the right side of the bus when the passenger entrance door is opened and the exterior lights are turned on
Exterior Lamps (exterior lights)	<ul style="list-style-type: none"> – tail lamps, side marker lamps, clearance lamps and identification lamps

Term	Definition
Flat Nose Bus	<ul style="list-style-type: none"> – “flat” front bus with the engine located behind the windshield and beside the driver – passenger door is ahead of the front axle
Forward Control Bus	<ul style="list-style-type: none"> – a flat nose bus with the engine located in the front (FC)
GVW (Gross Vehicle Weight)	<ul style="list-style-type: none"> – the loaded weight of a single vehicle, as measured at the tire-ground interfaces
Identification Lamps (clearance lights)	<ul style="list-style-type: none"> – three light cluster mounted as high on the centre of the body as possible indication of a vehicle that is at least 2.03 metres wide – amber to the front, red to the rear
Indicator Lamp (indicator light)	<ul style="list-style-type: none"> – indicator lamp inside the vehicle, visible to the driver and indicates when flashing lights are on
Inspections	<ul style="list-style-type: none"> – see CVSA, CVIP, pre trip, post trip
Licence Plate Lamp (licence plate light)	<ul style="list-style-type: none"> – illuminates the licence plate so the plate is clearly visible at least 15 metres to the rear – must turn on and stay lit when the headlamps are lit – may be built into a tail lamp
Manufacturers Rated Capacity (MRC)	<ul style="list-style-type: none"> – the maximum number of passengers the body is designed to transport at any one time
Motor Coach	<ul style="list-style-type: none"> – “highway” or “tour” style bus such as those operated by Greyhound
OEM	<ul style="list-style-type: none"> – original equipment manufacturer
Operator (driver)	<ul style="list-style-type: none"> – the person driving the bus
Post Trip Inspection (post trip)	<ul style="list-style-type: none"> – inspecting the bus for lost articles, sleeping children, vehicle condition, and any vehicle damage following a trip
Pre Trip Inspection (daily walk around)	<ul style="list-style-type: none"> – inspecting under the hood, exterior, and inside the bus prior to a trip
Pusher Style Bus	<ul style="list-style-type: none"> – flat nose bus with the engine located at the rear of the bus
School Bus	<ul style="list-style-type: none"> – a specially constructed vehicle that is designed to carry more than 10 persons (primarily children) to and from school or related events and is National School Bus Yellow in colour
Service Brake	<ul style="list-style-type: none"> – the “foot” brake used by the driver while driving

Term	Definition
Service Door (passenger door)	– front door normally used by passengers during loading and unloading procedures
Side Marker Lamps (side clearance lights)	– front (amber) and rear (red) lamps mounted on the side of the body to indicate vehicle presence and length
Single Rear Wheel (SRW)	– one tire at each of the rear wheel positions
Stop Lamps (brake lights)	– red lamps on the rear that indicate braking action by the driver
Strobe Lamp (strobe light)	– optional strobe roof mounted white lamp used to provide additional conspicuity of the school bus
Tail Lamps (tail lights)	– indicate vehicle presence from the rear – light up when the headlamps are on
Turn Signals (signal lights)	– indicate the direction the driver intends to turn the vehicle – when lit, must be plainly visible for 250 metres – white or amber (front) – red or amber (rear)



SERIES 2

**Loading, Unloading and Transporting Passenger /
Passenger Management**

SERIES 2

Loading, Unloading and Transporting Passenger / Passenger Management

SERIES 2.1: Loading, Unloading and Transporting Passengers

USE OF HIGHWAY AND RULES OF THE ROAD REGULATION (AR 304/2002) (Consolidated up to 152/2009)

43(1) *This section applies only to a highway that is outside of an urban area.*

(2) *A person driving a vehicle shall not park the vehicle on a roadway when it is practicable to park the vehicle off the roadway.*

(3) *Notwithstanding subsection (2), a person driving a vehicle shall not park the vehicle on the roadway, parking lane or shoulder of a primary highway except where:*

- (a) *the vehicle is incapable of moving under its own power,*
- (b) *an emergency arises, or*
- (c) *it is otherwise permitted by law.*

(6) *Notwithstanding this section, a person driving a vehicle,*

- (b) *in the case of a school bus, may park the school bus on the roadway for the purpose of loading or unloading passengers if that person cannot park the school bus off the roadway and still have a suitable space available on the ground for the passengers being loaded or unloaded.*

Definition of “roadway” in the **TRAFFIC SAFETY ACT:**

1(nn) *“roadway” means that part of a highway intended for use by vehicular traffic;*

COMMERCIAL VEHICLE SAFETY REGULATION AR 121/2009

Embarking and disembarking students

26(1) *The driver of a school bus shall not embark or disembark students onto or from a school bus unless*

- (a) *it is at a time and a place that is safe to do so, and*
- (b) *where applicable, it is in compliance with section 43 of the Use of Highway and Rules of the Road Regulation (AR 304/2002).*

(2) *When the driver of a school bus disembarks a student from the school bus, the driver shall not move the school bus after the disembarking until the student is observed by the driver to have reached a place that is safe from the traffic.*

Application of crossing arm outside of urban area

27 *Where a student must cross a highway outside of an urban area before embarking onto or after disembarking from a school bus, the driver of the school bus shall, as far as practicable, direct the student to cross the highway in front of the crossing arm of the school bus with the crossing arm in its open position.*

INTRODUCTION

Previous research conducted by Transport Canada showed that school bus travel is one of the safest methods of transportation.

The majority of school bus-related fatalities (62%) occur outside the school bus. When a school bus is involved in a collision, the outcome for the pupils travelling in it is very rarely death. The majority of reported injuries due to collisions are minor, involving cuts and bruises.

Historically, six to eight students a year require a hospital stay due to injuries sustained within the school bus.

Pupil deaths outside the school bus occur either when a motorist does not stop for a school bus that is loading or unloading students, or when the student is hit by the school bus itself. The primary concern for a school bus operator in loading and unloading situations is the safety of the student(s).

Students are at greatest risk when loading or unloading and it is critical that standardized procedures be followed at every stop. It can mean the difference between life and death.

Much of the problem surrounding loading, unloading, and transporting students results from the lack of control which an operator is able to exert over students and other motorists.

If an inattentive motorist neglects to stop while the bus is displaying the alternately flashing red lights, there is nothing the operator can do to prevent that vehicle from passing the bus at the time.

Similarly, it becomes difficult to keep any school age child from darting away from the bus and rushing across a highway without properly checking for traffic at the end of the school day.

What the operator can do, however, is recognize potentially hazardous situations and take action to prevent them before they happen - thereby increasing student safety and decreasing the possibility of harm for everyone.

In this series, you will learn the basic procedures and techniques used in safely loading and unloading passengers, how to manage potentially hazardous situations, and tips for effective student management on and off the bus.

Use of Highway and Rules Of the Road Regulation

Activating Flashing Lights, Etc.

73(1) A person driving a school bus shall

- (a) activate the alternately flashing amber lamps when that person begins to slow down the school bus for the purpose of stopping on a highway to load or unload passengers, and
- (b) activate
 - i. the alternately flashing red lamps, and
 - ii. the stop arm
 - iii. when the school bus is stopped on a highway for the purpose of loading or unloading passengers

(2) Subsection (1)(a) applies only in respect of school buses that are equipped with alternately flashing amber lamps.

(3) Subsection (1)(b)(ii) applies only in respect of school buses that are equipped with stop arms.

(4) A person shall not operate the alternately flashing lamps or the stop arm located on a school bus other than as provided for under subsection (1) or a regulation or a bylaw referred to in section 113(2) of the Act, whichever is applicable.

(5) Notwithstanding a regulation or a bylaw referred to in section 113(2) of the Act, when the alternately flashing lamps and stop arm are used pursuant to that regulation or bylaw they shall be used in the sequence as provided for under subsection (1).

Note: Section 113(2) of the Traffic Safety Act is outlined later in this session.

LOADING AND UNLOADING - GENERAL PROCEDURES

In this section we will cover the basic procedures required to safely bring the bus to a stop for loading or unloading. There are a number of variations to these procedures, such as loading and unloading from the right side, students going to or coming from the left side, in conjunction with a bus-turnaround and urban centers.

We will begin by looking at the basic overall procedures when loading or unloading on the right side and then review the other variations.

Remember, your alternately flashing lights are to **always** be used for loading or unloading, **unless** there is a municipal by-law prohibiting their use in a given jurisdiction.

In subsequent sections, we will deal with the problems you may encounter and suggestions for handling them.

Basic Procedures - Loading and Unloading Right Side:

1. Check Mirrors Often As You Drive:

- pay particular attention when you know a school bus stop is coming up
- get a good reading of the traffic patterns for both following and oncoming vehicles
- is traffic relatively clear?
- can the stop be made with little or no hazard to your bus, your passengers or other traffic?

- is there oncoming traffic that may cause a problem?
- is there a long line of vehicles following your bus that have not had an opportunity to pass the bus?
- does the driver following appear impatient or anxious to pass?

If there is traffic following or oncoming and you have an opportunity to let it pass, do so by slowing down well before the stop and allow the traffic to clear. The safest place for other traffic is GONE.

Where possible, do not attempt to control traffic with your alternately flashing lights. Rather manage traffic with respect and consideration.

Do not use the shoulder or “Parking Lane” of a provincial highway as a driving lane for your bus.

2. Activate the Alternately Flashing Amber Lights:

Alternately flashing amber lights must be activated as you first begin to slow for the purpose of loading or unloading passengers. This will give other road users ample warning of your intention to activate the alternately flashing red lights at an upcoming stop.

3. Signal Right:

This will indicate your intentions to change lane position. Do this at approximately 100 metres – if there is an approach or other driveway, hold your signal until you pass it.

Shoulder check and check your mirrors every time you change position in your lane.

Look ahead and choose a location that is as far right as practical, and one that will still give the passengers a safe footing, plus being at least 1 metre away from waiting passengers.

Children often want to be first in line with the potential for pushing and shoving, increasing the possibility of someone being shoved under the bus as you prepare to stop.

Once the bus is stopped:

4. Secure the Bus:

Cancel the right signal, place the gear lever in neutral, set the parking brake, and maintain pressure on the brake pedal. This must be done every time.

5. Mirror and Shoulder Checks:

Check for vehicles approaching from the rear, both sides and from the front. If unloading, ensure passengers remain seated until you are ready to unload.

Always double check again for vehicles that you may have missed the first time or vehicles approaching at a high rate of speed.

6. Open the Door:

Once the bus is stopped, opening the door cancels the alternately flashing amber lights and the alternately flashing red lights are activated along with the stop arm and crossing arm (if applicable).

Note: *Never activate the alternately flashing red lights until the bus has completely stopped, the bus is properly secured and the traffic is controlled!*

Do not close the door or deactivate the alternately flashing red lights until the passengers being loaded are safely seated or those leaving the bus are in the designated safety zone area.

7. Close the Door:

This will deactivate the alternately flashing red lights and you can now allow motorists to pass your bus since the passengers are either safely in the bus or in the safety zone.

Select the appropriate gear and release the parking brake. Make sure all passengers are seated and take one final look in the mirrors to ensure no stragglers are around the bus.

When unloading, count students as they get off the bus and again when they reach their safety zone (the safety zone will be discussed in detail later).

8. Mirror Check, Shoulder Check and Signal Left:

When safe to do so, pull back into the driving lane and proceed on your route.

What does the driver of another motor vehicle see when following a bus that is about to make a stop?

1. the alternately flashing amber lights;
2. the right signal comes on;
3. the brake lights;
4. as the bus stops the right signal cancels; and
5. the alternately flashing amber lights cancel and the alternately flashing red lights come on, plus the stop sign comes out with its flashing red lights.

There are three sets of lights being displayed when stopped: the alternately flashing red lights on the bus and the stop arm and the brake lights. Bus operators communicate to other motorists through the use of their lights, not by using hand-signals.

Basic Procedures - Loading and Unloading When Students Must Cross Highway (Left Side)

The procedures when loading or unloading at a left-side stop where passengers must cross the highway are similar to the right-side stop except for a few fundamental differences that are outlined below:

1. **Check Mirrors Often**
2. **Activate the Alternately Flashing Amber Lights**
3. **Signal Right:**
Move to the right as far as practical, allowing safe footing for the passengers. Stop the bus approximately 10 paces from the waiting passengers on the left side depending on road width.
4. **Secure the Bus**
5. **Mirror and Shoulder Checks**
6. **Open the Door:**
Operators need to have set clear expectations about how this procedure will work. Passengers should be instructed from the very beginning that when loading they need to pay particular attention to the operator and traffic before they leave their safety zone to cross the highway.

Frequently, sufficient natural light conditions do not exist during early morning pickups. This may require the bus operator area be illuminated with the interior light, so the operator will be clearly visible to the awaiting passenger(s).

The operator should place their hands at top of the steering wheel and establish eye contact with passenger(s).

Prior to crossing the highway the operator signals the passengers to proceed using a hand gesture when it's safe to cross. By leaving your hand on the steering wheel, you will not confuse other motorists into thinking you are waving them on. In fact, you should never wave another vehicle on as you might be held responsible if a passenger is injured.

By keeping your hands at the top of the wheel you also have quick access to the horn, should it be required.

For unloading, keep your passengers on-board until it is safe. Passengers should be instructed to walk 10 paces along the shoulder of the road in front of the bus and then cross the highway in front of the crossing arm.

Passengers should continually watch for traffic while crossing. It is a good idea to constantly talk to your passengers as they depart, letting them know about the traffic and reminding them to keep checking while crossing the highway.

7. Close the Door:

Once the passengers are safe, either sitting down in the bus or outside in the safety zones, close the door.

8. Mirror Check, Shoulder Check and Signal Left:

Loading and unloading are especially critical procedures when children must cross the highway to board, or leave, their school bus. Routes should be designed to minimize the number of crossings that children must make to board or leave the bus.

Wherever possible, passengers should be picked up and dropped off on the right side (home side) of the road.

Computer programs are being used in many school systems, which can help in developing safe routes.

Operators are out in the field everyday and can provide valuable input on bus routes and bus stop characteristics that may affect the safety of a stop. A stop that was safe at one time may become unsafe. Things can change on your route; trees and bushes may grow to create dangerous blind spots or traffic on a certain road could increase due to road construction or suburb development. These are things that need to be shared with your supervisor and the school district.

Rural - Loading and Unloading – With a Turnaround:

On most bus routes in Alberta, you may have to make at least one turnaround to avoid driving unnecessary extra kilometres. There are two types of turnarounds:

1. a right-side turnaround where you back into a road on the right and drive out, and
2. a left-side turnaround where you drive into a road on your left and then back out without crossing over two traffic lanes.

Right-Side Turnaround

The right-side turnaround is the safer of the two but both, while necessary in certain situations, should be avoided as much as possible. When a turnaround is required, remember that it is extremely dangerous to back from or onto a main road.

Never turn around at a road that necessitates backing out onto a provincial highway (single or two digit highway) or any other heavily travelled road.

Procedures for backing will be further discussed in Series 3.1, Bus Manoeuvres.

Basic Procedures - Loading – Right-Side Turnaround:

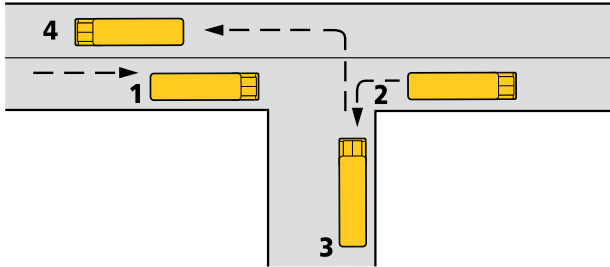


DIAGRAM:

- Load the passengers **before** the turnaround (in positions 1 or 2).
 - Unload the passengers **after** reversing (in positions 3 or 4).
1. **Perform: “Basic Procedures – Loading and Unloading - Right-Side”.**
 2. **Close the door when loading complete.**
Ensure the passengers are safely seated and the alternately flashing lights have been cancelled:
 3. **Mirror Check, Shoulder Check and Signal Right:**
Pull the bus approximately one bus length ahead of the road that you will be backing into.
 4. **Check Traffic and Reverse:**
Shift into reverse and back into side road when safe using your mirrors and shoulder checking to the right. Sound horn once for every bus length as you back-up until fully on the road being backed into.
 5. **Signal Left:**
Select forward gear, signal left and turn when it is clear and safe to do so.

Basic Procedures - Unloading – Right-Side Turnaround

1. **Check Mirrors Often**
Know where your traffic is. Start slowing down well in advance of the turnaround. Signal right as you pass the turnaround road.
2. **Stop the Bus on the Main Road**
It should be approximately one bus length ahead of the road that you will be backing into.
3. **Check Traffic and Reverse:**
Shift into reverse and back into side road when clear, using your mirrors and shoulder checking to the right. Sound horn once for every bus length as you reverse.

Bus position on completion should allow good footing for the departing passengers. This can become a concern when there is ice or snow build-up along the edges of the road.
4. **Activate the Alternately Flashing Amber Lights**
5. **Secure the Bus**
6. **Open Door and Activate Alternately Flashing Red Lights:**
Activate the alternately flashing red lights along with the stop arm and crossing arm (if applicable). Allow the passengers to get off the bus, counting them and ensuring they are all well past the end of the bus.
7. **Close the Door:**
Deactivate the alternately flashing red lights. Signal left and re-enter the main road when it is clear and safe to do so.

Basic Procedures – Loading and Unloading – Left-Side Turnaround

The procedures for loading and unloading using a left-side turnaround are very similar. There are, however, some special considerations when doing a left-side turnaround. Again this type of turnaround should never be done on a provincial highway or other heavily travelled road.

A left-side turnaround is particularly prone to poor sightlines, making visibility of oncoming traffic very difficult. If the sightlines are poor and safety is an issue then this type of turnaround should be avoided. In this type of situation it is imperative that there are clearly designated safety zones, so that the waiting passengers know exactly where to stand.

Note: *due to weather (i.e., amounts of snow) these safety zones may need to change.*

Ensure that you openly communicate with passengers about these concerns and changes. While this type of turnaround is not illegal, it should be done only when absolutely necessary and where there is no safe alternative; keeping in mind that reversing a school bus is potentially dangerous and great caution must be exercised.

1. Signal Left:

This will indicate your intention to turn into the next road up ahead. Do this at approximately 100 metres. Scan your mirrors often and shoulder check before turning left. Turn left when safe.

2. Activate the Alternately Flashing Amber Lights

3. Secure Bus

4. Open Door:

Activate the alternately flashing red lights along with the stop arm and crossing arm (if applicable). Let the passengers on or off, watching them as they proceed to or away from the bus.

5. Close the Door:

Deactivate the alternately flashing red lights. Wait until the passengers are safely seated or you can see that they have moved a safe distance away from the bus, select reverse, sound horn once for every bus length as you back, and using your mirrors and sightlines, back into the closest lane without crossing the centerline. Signal left and proceed when safe.

The obvious advantage of using turnarounds is that by leaving a main road to a less travelled one, you reduce the potential traffic conflict hazard on the main road and increase safety for the passengers.

It should be kept in mind that when doing a turnaround it must be made **before unloading** and **after loading**. This means that passengers should never be near the bus when doing a turnaround.

Remember: "Students on the ground – don't back around!"

If sightlines are obstructed or there are situations where the conditions and terrain could make backing into a road difficult, (i.e., narrow road, snow-bank), then safety becomes the main concern and other options for loading and unloading need to be considered.

Hazardous Situations

You must always be prepared for the unexpected while loading and unloading because so much is dependant on other drivers and the passengers. Common courtesy and extreme caution are advised in all situations.

When Traffic is Following the Bus:

This is an occurrence that becomes more hazardous on highways that do not easily facilitate passing. Drivers may become impatient and anxious and eventually angry. Whenever you can, allow traffic to pass.

If the pass appears to be safe, without creating a hazard:

- maintain your lane position, either in the centre of the lane or slightly to the right to allow extra clearance
- maintain or reduce your speed to a reasonable rate, avoid the tendency to accelerate.

Allowing vehicles to pass may take a couple of extra minutes, but greatly reduces the risk of having a driver pass during the loading and unloading process. It is generally preferable to allow a driver to pass when they are driving erratically or appear inattentive.

Note: *Do not drive on the shoulder area or “parking lane” portion of a highway when other traffic is passing you.*

After loading or unloading, allow traffic to proceed before you resume your position on the highway. School bus operators have been criticized for pulling back into traffic before turning off the alternately flashing lights, thus, “trapping” traffic behind them. The courtesy you show other users of the road will make it a safer place for everyone.

Safety Zones

Student loading and unloading is the time of greatest danger to the students.

Students across North America have been killed in the process of loading or unloading when the very bus that they ride on has run them over. This happens because there is a **danger zone** around the bus. The bus has many areas that are not visible to the operator.

Buses have pulled away thinking that the passengers have gone into their home or are down the street on the way home. In reality the passenger has gone under the bus to pick up something and the rear wheels ran over the passenger.

Other tragic situations have occurred when passengers, after getting off the bus, have climbed onto snow banks beside the bus to talk to or wave to their friends still on the bus and then slipped off the snow bank and slid under the bus just as it was pulling away.

The only way that you can know if one of your passengers is not under the bus is to assign a safety zone for passengers waiting for the bus and a safety zone for them to go to once they have gotten off the bus.

In areas where you are required to use the alternately flashing lights:

- passengers living on the opposite side of the road would go to a designated safety zone on that side of the road where the operator can see them.

- passengers living on the same side of the road would go to a safety zone that is clear of the bus and where the operator can see them.

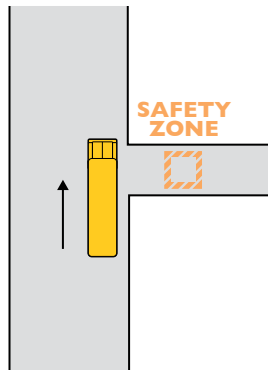
Prior to pulling away after unloading you would check both safety zones and ensure all of the passengers are accounted for. This is where counting the number of passengers leaving the bus at each stop is important.

If you have lost track of a passenger you **must** secure your bus, do a total shut down, take the key, and go out to check around the bus. If the passenger is nowhere to be seen, you would write up the incident and take the report into the school the following morning. This is a potentially serious incident since the passenger was not visible to the operator by being in the safety zone as required prior to the bus pulling away.

Examples of Safety Zones When Alternately Flashing Lights Are Being Used:

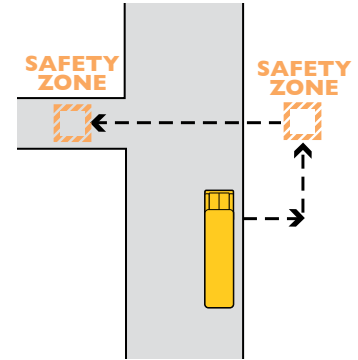
On rural roads when passengers do not have to cross the road:

On a rural road with a driveway the bus operator would block the driveway and the safety zone where the student(s) wait would be a minimum of one metre down the driveway.



On rural roads when the passenger(s) cross the road:

The bus is positioned to allow the student(s) to walk ahead of the bus 10 paces, and wait for the operator's signal to proceed. Once the operator has ensured the alternately flashing lights are activated and that all traffic is stopped, a signal would be given to the student(s) to cross the road. The student(s) should be trained to do one last check for traffic before leaving the safety of the front of the bus. The student(s) remain in the safety zone across the road until the bus leaves.



Urban Areas

The Traffic Safety Act defines "urban area" as follows:

1(vv): "urban area" means a city, town, or village or an urban service area within a specialized municipality.

Alternately flashing amber or red lights must be used at all times when loading or unloading **unless** a municipal bylaw or a Ministerial regulation specifically exempts the use of the alternately flashing lights and stop arm.

Section 73(4) of the **Use of Highway and Rules of the Road Regulation** states the following:

73(4) A person shall not operate the alternately flashing lamps or the stop arm located on a school bus other than as provided for under subsection (1) or a regulation or a bylaw referred to in Section 113(2) of the Act, whichever is applicable.

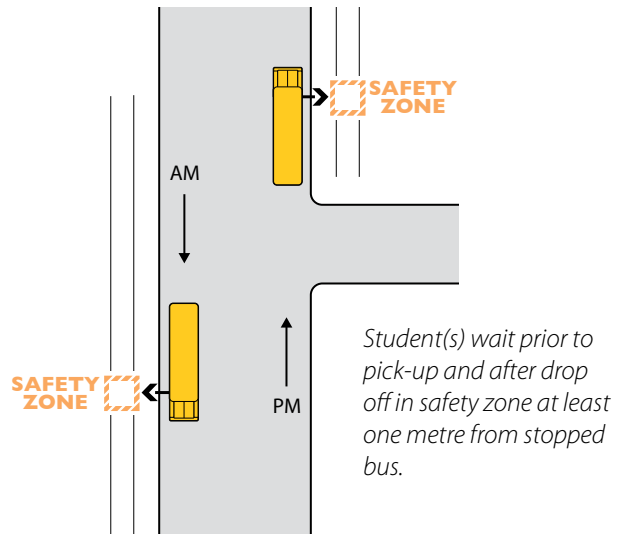
Section 113(2) of the **Traffic Safety Act** reads as follows:

(2) Subject to the regulations made under subsection (1), in the case of a highway or a portion of a highway

- (a) that is under the direction, control and management of the Minister, the Minister may make a regulation; or*
- (b) that is under the direction, control and management of a municipality, the municipality may pass a bylaw, governing the times during which, the locations at which or the circumstances under which, as the case may be, the alternately flashing lights and stop arm on a school bus may be, shall be or shall not be used while the school bus is operating on that highway or that portion of highway.*

There are many urban areas where local by-laws prohibit school bus operators from activating their alternately flashing lights. Other motorists are free to pass the bus any time. In such situations, it is important to remember the following guidelines for urban areas:

- If there are passengers living on both sides of the road then you will have two safety zones.
- If you are picking up and dropping off in the same location you will only need one safety zone.
- If the route is reversed, on the p.m. route you will need two safety zones, one for the a.m. and one for the p.m.



Once the bus has left, the passenger(s) walk back to the intersection, look both ways and cross the road when it is safe. Children should be encouraged to use the **Point, Pause, & Proceed** method to cross the road in urban areas. This is where they hold their arm straight out at right angles to their body pointing in the direction they wish to cross, all the while checking for traffic while in the crosswalk.

Prior to pulling away from the stop check the safety zone and ensure all of the passengers are accounted for. If you have lost track of a passenger you **must** secure your bus; do a total shut down, take the key, and go out and check around the bus. If the passenger is nowhere to be seen, you would write up the incident and take the report into the school the following morning.

School personnel and caregivers may not understand the dangers of loading or unloading, and it may be necessary for the operator to repeatedly remind the passengers on safe loading and unloading procedures.

The procedure should be reviewed at the beginning of the year plus at least three additional times throughout the year, and whenever a new passenger boards the bus for the first time.

Remind the passengers that cross the road without the benefit of the alternately flashing lights to:

1. **Wait in the safety zone until the bus departs.**
2. **Go to the intersection.**
3. **Look around 360 degrees and, when safe, cross the road using the Point-Pause-Proceed method.**

Safety Note: *At times caregivers, in their lack of knowledge of the safety zones, will walk a passenger in front or behind a bus before the bus has departed. In a respectful manner, explain that the children have been trained to wait in a designated safety zone. Emphasize that safety zones are important for the safety of their child. If they refuse to comply, bring it to the attention of the school administration.*

Passenger loading or unloading in municipalities where there has been a by-law passed prohibiting the use of the alternately flashing lights

LANE CHANGE RIGHT; Mirror check, shoulder check, signal right and when safe, move to the right portion of the road or the curb, ensuring in each case that there is safe footing for the passengers.

STOP ONE METRE FROM THE NEAREST PASSENGER: Your passengers should be trained to wait in the designated safety zone. If they are playing and pushing as you approach, stop at least three metres away from the passengers - motion for them to go back to the designated safety zone and then pull up cautiously, stopping one metre from them.

When you are training your passengers on safe loading or unloading procedures, it is important that you emphasize that they are not allowed to move towards the bus until the door is fully opened, and you have motioned for them to proceed (the door open could be the agreed upon signal for the passengers not requiring a further signal on your part – keep in mind that hand signals could be misinterpreted by motorists.)

SECURE THE BUS: Park brake on, transmission in neutral, and foot firmly on the foot brake. Cancel your signal. None of the steps can be eliminated in securing the bus.

If the bus is not secured properly, there is a risk that it could move while passengers are loading or unloading. Even if you are driving a bus with an automatic transmission that has a park position you must still use the park brake.

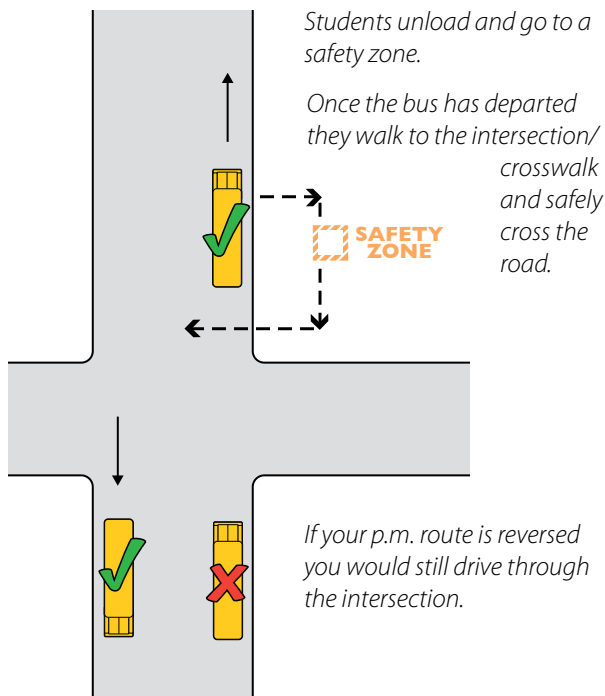
OPEN DOOR: When you open your door fully it will be a signal for the passengers to start boarding the bus (or also a signal from you, if this has been agreed upon previously with your passengers).

WHEN THE LAST PASSENGER IS SEATED: Close the door, ensure passengers remain seated, select gear, release park brake.

MIRROR CHECKS: Before moving the bus check for latecomers, other pedestrians, animals etc. starting with the right side mirror, to the crossover mirror, then the left mirror for traffic. When safe, signal left, check crossover mirror one more time, and proceed.

When you are assigned a route there will be a map and/or running board that has been prepared by the school district or your company. Usually this information will tell you the location of the stop but not the stop position.

Stop Positions Four Corner Intersections

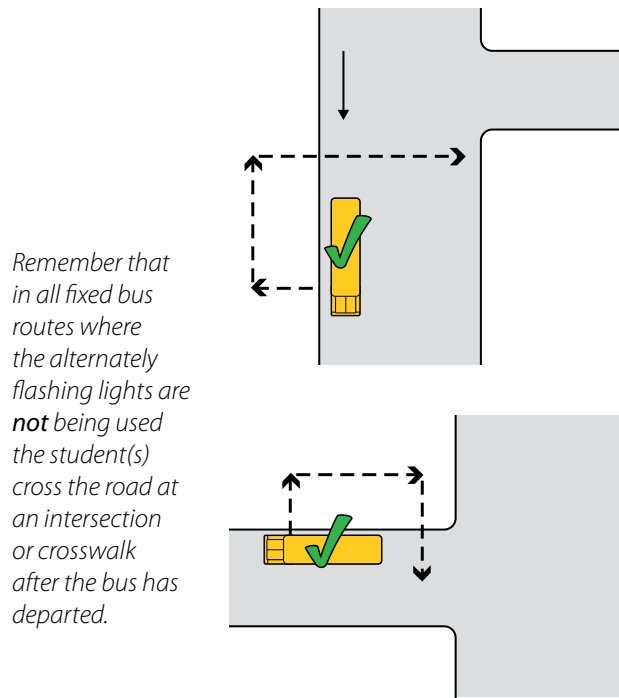


Even if the students do not have to cross the road they must wait in the safety zone until the bus has left.

The school bus industry standard is that most stops (when the alternately flashing lights are not being used) should be just **through or past an intersection**. Seldom will there be a mid-block stop. If there is a mid-block stop on your route discuss this with your supervisor. A mid-block stop is not recommended for passengers who have to cross the road.

T INTERSECTIONS:

T intersections follow the same rule. Always remember - the passengers are required to cross the road at an intersection and crosswalk after the bus has left.



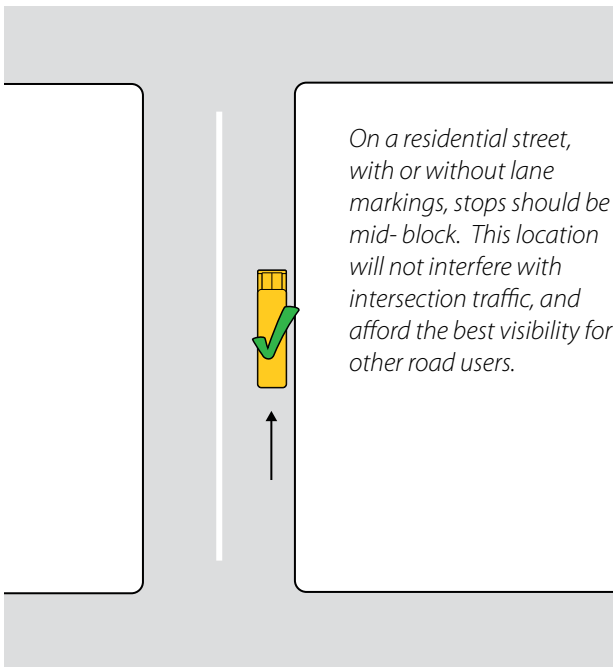
If your route sheet indicates a turn (right or left) the best stop location would be after the turn.

In many areas, transit stops are also designated stops for school buses. As a professional you will have to make a judgment call as to whether the position of the transit stop meets the criteria of a stop position through the intersection. Check with your supervisor if you are permitted to use transit stops and what conditions may apply.

Special circumstances may require routing changes that do not meet the criteria of a loading or unloading stop positioned “through the intersection”. The age of the passenger or medical requirements may necessitate the route planner to make exceptions. If that occurs, confirm with your supervisor that the routing information you received is correct, and that the safety of the passenger is assured.

Loading or unloading procedures in urban areas where there is no by-law prohibiting the use of alternately flashing lights

Picking the right location for safely loading or unloading passengers requires that consideration be given to the traffic, road configuration, and any special circumstances.



Generally a mid-block stop would be the safest. This location would only involve a road that is not divided by a median. If you stop close to an intersection, for the safety of passengers you would need to take cross-traffic into consideration. Remember your alternately flashing lights do not control traffic on the cross-street or intersecting road.

COMMERCIAL VEHICLE SAFETY REGULATION

AR 121/2009

Embarking and disembarking students

26(1) The driver of a school bus shall not embark or disembark students onto or from a school bus unless

- (a) it is at a time and a place that is safe to do so, and
- (b) where applicable, it is in compliance with section 43 of the Use of Highway and Rules of the Road Regulation (AR 304/2002).

(2) When the driver of a school bus disembarks a student from the school bus, the driver shall not move the school bus after the disembarking until the student is observed by the driver to have reached a place that is safe from the traffic.

When Students Must Cross Highway

Application of crossing arm inside urban area

28(1) Subject to subsection (2), where a student must cross a highway inside an urban area before embarking onto or after disembarking from a school bus, the driver of the school bus shall, as far as practicable, direct the student to cross the highway in front of the crossing arm of the school bus with the crossing arm in its open position or at a crosswalk.

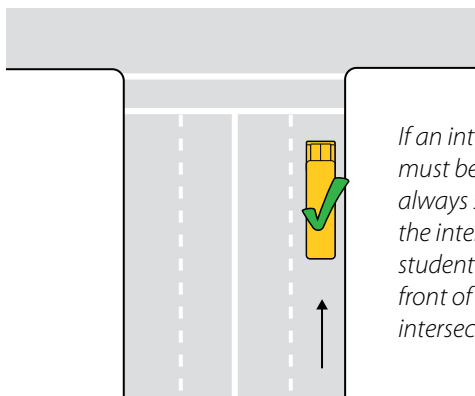
(2) Where a student must cross a highway inside an urban area before embarking onto or after disembarking from a school bus, the driver of the school bus shall, as far as practicable, direct the student to cross the highway at a crosswalk if the council of the urban area has enacted a bylaw that prohibits the school bus from using

- (a) a crossing arm,
- (b) a stop arm, or
- (c) alternating flashing warning lamps.

If the alternately flashing lights are required in an urban area and the route planner indicates that a stop should be at an intersection, then it should be just prior to crossing the intersection and before the crosswalk.

By choosing that location the passenger will be crossing in front of the bus, with the aid of the alternately flashing lights, in a crosswalk.

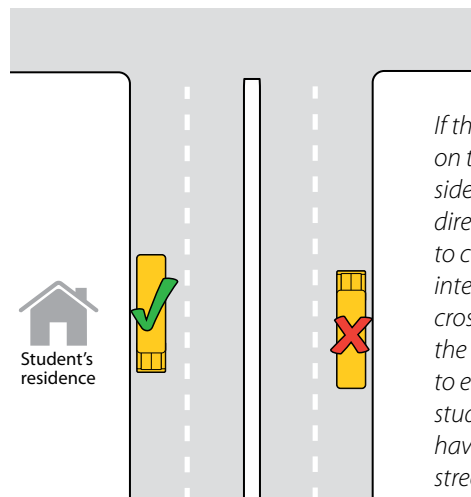
Extreme caution still needs to be used. Drivers turning the corner may not see the alternately flashing lights or the passenger crossing the road.



If an intersection must be used, always stop before the intersection so student(s) will cross in front of the bus at the intersection.

When loading or unloading in an urban area, and where the road is divided by a median, only the traffic approaching from the rear must stop. In this situation, passengers having to cross the street would be doing so without the benefit of the alternately flashing lights since traffic on the other side of the median would not have to stop. This is where stopping just before an intersection or crosswalk would be preferable.

On a street divided by a median



If the student lives on the opposite side of the street direct the student to cross at an intersection or crosswalk or have the route changed to ensure that the student does not have to cross the street.

Please remember: Passenger loading/ unloading is the time of greatest danger for your passengers.

Do one thing at a time

- Never lose sight of your passengers and always be aware of other children, animals etc. that could be around your bus.
- There isn't any room for complacency. Just because a passenger has done it right 122 days - on the 123rd day he or she just might go under the bus for a book that dropped.
- The only thing predictable about children is that they are unpredictable.

A Bus Operator's True Story

"I was about half way through my afternoon run and dropping off a passenger at the daycare that he attends. This particular daycare is situated in a strip mall with storefront glass pretty much the length of the building.

After I drop this passenger off, I always wait to make sure he gets in the door before I drive off.

On this particular day, there was a car to my left, honking at me because I was apparently blocking the parking spot he wanted. I looked over my left shoulder at him and motioned to him that I would be just a moment. In the time I had looked away the student appeared to have gone inside already.

Now, a less experienced operator may have assumed he was safe inside, but I wasn't about to take that chance, and to this day I will never forget the feeling that went through me as I later thought about what could have happened if I had just proceeded on with my route.

As I looked in the window of the daycare from my bus, I could see the reflection of him under my bus with his head situated just inches from the rear wheel. He had apparently dropped the cap to his thermos and it rolled under the bus and he was trying to retrieve it.

If I had even rolled ahead a little...well I don't want to think about what would've happened. So please don't hesitate to use my example to stress the importance of knowing the whereabouts of the student after they step off the bus." Scott McCurdy Route 404 5/1996

In School Yards

School yards, particularly at the end of the day, can present special hazards. Typically, the yard is filled with a large number of passengers.

If this is the case, proceed with caution to the pick up or drop-off location and, if necessary, stop completely before reaching the designated stop and wait for the "excitement" to subside.

Some schools have instituted special procedures or have assigned supervisors to assist in loading and unloading at the school. Give your fullest cooperation to these people in carrying out the procedures they have instituted.

For these reasons, buses should be in position for the afternoon pick up prior to the dismissal of passengers from classes.

Keep in mind that passengers who do not ride the buses also present a hazard as they may run in between buses or be in a rush to meet parents.

Safety Reminder: *These are not the only loading and unloading situations you will face as an operator that involves a hazard to passengers or others. Therefore, it is essential that you constantly monitor what is going on around the bus and always be prepared for the unexpected.*

Young Children with Special Needs:

- Special-needs children should never be required to cross a road unless they are accompanied by a responsible person such as a parent or caregiver. In certain cases an older child, if mature and responsible, could also assist.
- In most cases, where practical, loading and unloading should be done door-to-door.
- Bus operator must watch the special-needs child gain entry to the home/business/school and a responsible person should acknowledge that they now have the child in their care.
- If no responsible person is there to receive the child and no prior arrangements have been made, contact your supervisor.

TRANSPORTING PASSENGERS

Just as there are certain procedures for the bus operator to use in loading and unloading, there are also guidelines that passengers should follow to reduce the risk of injury.

Passenger Guidelines

Your school jurisdiction may already have established guidelines for passenger conduct during loading and unloading. They may be very similar to the guidelines outlined below. The following are good safety practices that passengers should adhere to everyday.

Designated Stops and Safety Zones

Passengers should enter and exit the bus at school loading areas and at highway stops in an orderly fashion and in accordance with your instructions such as:

- without haste and loitering
- without crowding, pushing and shoving
- never playing on the road
- with regard for one’s own safety and the safety of others, and
- never cross in front of the bus unless directed to do so by the school bus operator.

In the **COMMERCIAL VEHICLE SAFETY REGULATION** AR 121/2009 it states the following;

Standing, etc., in school bus

29 When a school bus is used for a purpose under section 19, no person shall

- (a) stand in the school bus,*
- (b) get up from that person’s seat in the school bus, or*
- (c) embark onto or disembark from the school bus while the school bus is in motion.*

Passengers should go directly to their seat upon entering the bus and remain seated while the bus is in motion and:

- remain seated until the bus has come to a complete stop and the operator opens the door indicating that passengers may now stand up and leave the bus
- the operator shall not put the bus into motion until all passengers are safely seated.

When unloading at the school, passengers shall not stand-up until the bus door is opened. This is a good time for the operator to reinforce both emergency evacuation procedures and to give positive reinforcement to those passengers that were “caught at being good”.

Once the bus is secured, the operator will stand facing the passengers and state the order in which passengers will leave their seats, row by row.

One day you could let passengers off the bus starting at the front left, then the front right, right thru to the back. The next day the right side could be first. Even starting from the back following the same procedure is great. This is an opportune time, as the passengers are exiting to comment on an individual passenger’s excellent behaviour on the way to school. This will provide a positive reward for the passenger earning the praise and other passengers hearing may also try to earn similar praise on future trips. It is important to watch for and comment on even the smallest improvement.

Additional Articles

Passengers must not bring additional articles on board the school bus that cannot be stored safely.

In the **COMMERCIAL VEHICLE SAFETY REGULATION** AR 121/2009 Schedule 1, Commercial Vehicle Safety Standard it states the following;

Luggage, cargo, goods, equipment

15(1) In addition to the requirements of the Vehicle Equipment Regulation regarding transportation of goods, a bus shall not be operated unless the luggage, cargo, goods, equipment and tools that are carried on the bus are carried in an adequate place provided for the carrying of those items.

(2) The place provided for carrying luggage, cargo, goods, equipment or tools under subsection (1) must

- (a) not interfere with free access to the exits of the bus,*
- (b) be constructed so as to prevent the luggage, cargo, goods, equipment or tools from falling on or against a passenger, and*
- (c) in the case of passenger luggage, protect the luggage from dust and moisture.*

Prohibitions

23(1) In this section, "guide dog" means a guide dog as defined in the Blind Persons' Rights Act.

(2) When a school bus is used for a purpose under section 19, no person shall convey in or on the school bus

- (a) animals,*
- (b) firearms,*
- (c) explosives,*
- (d) combustible materials or substances, or*
- (e) anything*
 - (i) of a dangerous or objectionable nature, or*
 - (ii) that might endanger the lives or safety of persons in the bus.*

School Boards may have a policy that specifies which items may be transported to and from school. This policy should comply with the law. Discuss further with your instructor the policies in your jurisdiction.

Appropriate Clothing

Passengers should wear clothing that is appropriate for the outside weather:

- Do not refuse to allow a child on your bus that is not appropriately dressed for weather conditions. Talk to the principal or your supervisor about your concerns.
- Inappropriately dressed passengers could become a safety concern if the bus was involved in a collision or breakdown requiring evacuation.
- Operators transporting passengers that are wheelchair users and/or have a medical condition that limits mobility should have a blanket on the bus that can be used in the case of breakdown.

Remember that passengers as well as their parents will need to be reminded often of the procedures for loading and unloading. A professional operator never becomes complacent during this process as a child's life is too much to risk for one moment of inattentiveness.

SERIES 2.1: LOADING, UNLOADING AND TRANSPORTING PASSENGERS

REVIEW WORKSHEET

1. You are driving on a fairly busy highway, visibility and road conditions are good. As you approach your next drop-off, during your mirror scan, you observe a car following very close. The driver seems impatient and wanting to pass. What should you consider doing and why?
2. When loading students during a right side pickup why should you maintain a distance of one metre when stopping?
3. Using the lights of your bus to communicate with other drivers is considered the most effective method. Name one reason why you should never use hand signals?
4. Name one problem that might be created by activating your alternately flashing red lights before your bus is completely stopped and secured:
5. Loading and unloading students from the left side of the road may present serious hazards. What can the bus operator do to increase safety?
6. When backing during a turnaround student safety is very important. Please provide one key point that needs to be considered when loading or unloading students during a turnaround:
7. Safety Zones are defined as:

Series 2.2: Passenger Management

INTRODUCTION

As a professional school bus operator your main objective is to safely transport passengers to their destinations. Your job demands far more than just driving the bus along a predetermined route.

Regardless of how good an operator you may be technically, if you frequently encounter passengers with behaviour problems while you are driving, the safety of you and your passengers can quickly be jeopardized.

In this section, we will be dealing with ways in which you can influence your passengers to carry out safe bussing procedures, allowing you to do your job more easily and effectively.

OPERATOR OBJECTIVES

As a key member of the passenger transportation system, you are expected to perform your job in a safe manner that is conducive to good relationships between you and your passengers.

You will never have all your passengers behave exactly as you wish for every trip. However, there are ways for the operator to encourage, reinforce or discourage certain types of behaviour.

In order to do this, there are three objectives related to passenger improvement that you should seek to attain.

1. To develop an atmosphere of friendly cooperation and a sense of responsibility between operator, passenger, parent and the school administration.
2. To firmly establish, from the start, procedures and responsibilities of the passengers for loading, unloading and conduct on the bus.
3. To be able to effectively and efficiently deal with and resolve “conflict” situations when they arise.

PROFESSIONALISM

Operator professionalism will go a long way to developing an atmosphere of friendly cooperation between passengers, parents, school administration.

This operator “professionalism” shows up in the following areas:

Appearance

An individual who takes the time for personal grooming and keeps their bus clean and in good condition sends a strong message to passengers that they care about their job and the passengers they are transporting. A sloppy bus operator sends the opposite message.

Attitude

Attitude can make the difference between an enjoyable ride and disaster.

Having respect for your passengers will earn you respect in return. Every passenger on your bus deserves your respect. You may have to be the one to initiate this cycle of respect. Don't automatically expect your passengers to respect you simply because you are an adult or a bus operator – you have to earn their respect and you do that by respecting them.

Remembering that you are dealing with various age groups, from different backgrounds and at various stages of their lives.

Your attitude can have a great deal of influence in your passengers' lives. Similarly, their attitude can greatly influence your job from one day to the next. As an adult, you need to take the initiative with a positive attitude starting with a simple, “good morning” or “how was your day”? In dealing with passengers a good sense of humour can be a wonderful attribute! “Your attitude influences your driving skills”.

A friendly SMILE goes a long way! Your smile may be the first warm greeting that some of your passengers have encountered that day. You may not always get a visible return on your smile, but it may still help to get the day off to a better start for everyone.

OPERATOR CONDUCT

Setting a good example for passengers will encourage them to behave as such:

- be on time; if you are never on time at a pick up point, you cannot expect your passengers to be on time
- speak in a normal tone of voice; not raising your voice will encourage your passengers to do the same
- be respectful of your passengers' needs and concerns
- allow your passengers to make mistakes and, with your guidance, to correct them as soon as possible
- leave your personal problems at home, focusing on your job; don't be moody; try to be the same each day so your passengers know what to expect.
- deal professionally with passengers, parents, and the school when conflicts arise; avoid focusing on personalities when resolving a conflict – concentrate, instead on how the incident affects the safety of the passengers on the bus; safety should always be the focus.

DEALING WITH DIFFICULT PEOPLE

This could include a parent, school personnel, other road users, management, or another bus operator. Since about one-third of our lives are spent at work associating with people whom you have not necessarily chosen to be with, and considering the pressures and high demands of passenger transportation, it is not unreasonable to expect that there may be disagreements.

Parents' expectations of your service and protection of their child are great, and rightly so – after all they have put their child in your care.

School administration is there to intervene and assist you in passenger management; however there will be times when their perception will be that you are not following through properly on the district's approved discipline plan.

Road rage, these days, is a very real possibility with reports that many Albertans have experienced acts of road rage directed against them.

The individuals that we are required to deal with may just be having an extremely difficult day, and act out aggressively without thinking. Remember people become angry when they feel that their judgement, performance or values are being challenged.

While there is no excuse for the actions of people who attack us verbally, with anger and aggression, we need to understand that, for some, it is a normal reaction to certain situations. However, since anger is a human emotion, it is not always rational in its expression.

Take Charge of the Encounter

When you are confronted by an angry individual, you are in control of how you choose to respond.

Apologize

If you are running 30 minutes late because the alarm didn't ring, simply apologize. Avoid laying blame elsewhere – "the power was off" or "my cat hit the off button". The angry person just needs to know that you sincerely apologize and will try to ensure that it won't happen again.

Be Prepared

Many people are responsible for making decisions that affect what you do. Have a list of the following decision makers and their phone numbers. The route planner, district transportation director, safety manager, fleet manager etc.

When confronted by an angry parent because the stop is not in front of their house you can simply say, "I understand your concern; here is the name and phone number of the person that is responsible for routing." Have a pen and paper to write the information on.

Do not say, "It would be no problem for me to stop here but you have to contact" This may diffuse the situation and make you the "good guy", however it may cause major conflict for the route planner.

Empathy

When being verbally attacked, it is extremely difficult to remain calm. Most people will feel threatened. Many will become defensive and some will react in anger. Taking a deep breath has a calming effect. Remember you are the professional and you are in control. In any situation, there is only one person you have complete control over – and that person is YOU!

Practice the following responses so that you are mentally prepared:

- "I can understand your concern".
- "Perhaps calling (*give them the appropriate name*) will offer a solution".

During your regular route you may not have time to enter into a discussion involving possible solutions to that person's concern. Ask if they will give you their phone number so you or another responsible person can call them back. It's very important that if you make a commitment – always follow through.

Watch Your Body Language

Taking that deep breath will visually relax your body. Acknowledge that you are listening by nodding and saying, "I understand".

Watch the Body Language of the Aggressor

If you see someone approaching your bus with a longer than normal stride, fist balled, and angry face, do not open your door. Direct them to the operator's side-window.

If you are in radio contact with your office, put them on alert that there may be an "operator in danger" incident occurring. If you are able to diffuse the person's anger – great! If not, call for law enforcement.

THE THREE R'S:

Rights

The passengers have a right to a safe and pleasant trip along with a kind and caring bus operator.

Respect

The passengers first have to respect themselves. Secondly, they need to respect the other passengers' rights to a safe and pleasant trip. Lastly they need to respect the position of responsibility that the professional school bus operator holds. Through your examples of respect for everyone that you come in contact with; the passengers, parents, and school personnel will continue to build on that initial respect. Remember that the cycle of respect starts with you.

Responsibility

You have the responsibility to operate the bus safely and ensure that it is a pleasant ride for all of your passengers. The passengers also have responsibilities – to ensure that you can drive safely and free of unnecessary distractions. That means that the passengers need to stay seated, keep the noise level down, and their hands and feet to themselves. This is their responsibility to themselves, the other passengers, and you.

MANAGING PASSENGER BEHAVIOUR

Almost anyone, with proper training, can drive an empty school bus in a reasonably safe manner. Put up to 72 passengers in the same bus and the dynamics change dramatically. You are now turning your back on up to three classrooms of passengers, in a confined area, manoeuvring an 11.5 metre vehicle through rush hour traffic. While this may sound daunting, with some basic passenger management skills, this can be accomplished.

Next to driving the bus, managing passenger behaviour and maintaining effective discipline is the second most important responsibility of the professional school bus operator. Proper behaviour not only makes the ride more enjoyable for everyone, it also adds to the safety of the ride.

The following guidelines and suggestions on developing meaningful relationships should help you avoid or handle problems that arise:

1. **Consistency:** Do not allow a passenger to violate a behaviour policy one day and then enforce it the next day. Passenger responsibilities are the same each day regardless of age or behavioural disorders (such as ADD, ADHD, FAS, etc.). When dealing with behavioural disorders the only difference is in how you approach the passenger and how innovative you will be in developing strategies that are effective for dealing with that individual passenger.
2. **Take Time to Explain Your Request to the Passenger:** This does not mean to enter into a debate as to why you have made the request. Passengers have basic responsibilities, and the most important is to obey the directions of the bus operator. Everything you ask a passenger to do should have one purpose, to ensure the safety of all of the passengers and that every passenger has a pleasant ride. The only explanation necessary to the passenger is *“for your safety!”*
3. **Express an Interest in the Passenger’s Welfare:** The professional school bus operator is not the passenger’s teacher, parent or guardian. The interest that we express is for their comfort level to and from school. If you come across information that might impact the physical or emotional well being of the passenger, bring it to the attention of the school administration or your immediate supervisor.
4. **Maintain a Sense of Humour:** Professional school bus operators transport children who have an abundance of energy. Children have good and bad days (just like adults). Being positive rather than negative and seeing the humour in many of the situations you encounter will assist you in effectively handling most problems that do occur.
5. **Seek Ways to Compliment Good Behaviour:** Passengers thrive on compliments. While it may be an expectation that they remain seated - for some passengers, this is a real accomplishment. Reinforce the behaviours you want to see by compliments. **“Catch Kids Being Good”**

SCHOOL ADMINISTRATION ROLE

When you start a new route:

- go into the school office and introduce yourself
- ask who you would report to if there were discipline concerns on your bus
- request a meeting with that person, and
- ask how various situations should be handled such as misbehaviour, no one there to meet a Kindergarten or Grade One passenger, bus passes, parking at the school etc.

In all cases when handling discipline concerns, you will work in cooperation with the school principal or their designate. The school principal is ultimately responsible for handling serious discipline issues up to and including the suspension of a passenger's bus riding privileges.

By establishing communication and guidelines before there is a problem, in most cases solutions will be achieved quickly.

With more serious discipline problems, a meeting between yourself, the school principal, the parents or guardians, and the passenger may be recommended. Notify your immediate supervisor (district transportation director or your employer) that a meeting is being arranged. They may want to attend.

What is a Professional School Bus Operator?

Reprinted from Ann Landers

A school bus operator is a person who smiles in the morning and smiles in the evening, and eats Roloids in between. A school bus operator gets there when nobody else can, finds the houses that don't exist and children with no names. School bus operators have eyes in the back of their heads, and hear every word, even in sign language. School bus operators are immune to noise; a school bus operator's favourite words (beside "good morning" and "good night") are "sit down". Sometimes a school bus operator gets tired, but seldom gets mad and always, most faithfully, gets there.

WHAT PROFESSIONAL OPERATORS CAN DO

- You are in control. The way that you handle yourself will have much to do with how disciplined your passengers are. Try your best to never lose your temper. If you do lose your temper you are allowing the passengers to control your behaviour. At all times be a professional.
- A good suggestion is that once you identify inappropriate behaviour, think for a second before reacting, and then intervene in an appropriate and controlled manner.
- Outline your responsibilities and the passenger's responsibilities from the start so that passengers know what is expected of them. A good time to do this is after you have boarded the passengers in the afternoon on the first or second day of school. A review should be done every season change (fall, winter and spring) as well as the first day back after holidays.
- Demonstrate leadership and show the passengers by your behaviour that you care about them and explain why you need to set guidelines and limits on their behaviour. Avoid saying "Because I said so!". It is important that you express to your passengers the understanding that they have as much value and responsibilities as you do. Every person on the bus, including the operator, has equal value and deserves equal respect.
- *Because it is "our" bus, we all have a responsibility for making it a good place to be.*
- Try to create an atmosphere of friendly cooperation among your passengers. If the passengers feel that they have a working relationship with you, they will be more willing to cooperate.

The following are samples of the responsibilities and consequences that have been approved by some school districts. They can be modified for your particular situation. When making modifications ensure that they are approved by the person responsible for passenger management in your district.

Passengers... For Our Benefit

Please Note

It is Your Responsibility to:

1. Always obey the directions of the bus operator.
2. Remain seated while the bus is in motion. The bus operator will let you know when you can get up and exit the bus.
3. Ensure that nothing is extended or tossed outside of the bus through open windows.
4. **Stop** fighting, teasing, and bullying
5. **Stop** loud or distracting noises.

Whenever there are responsibilities there will also be consequences. ***Consequences are a result of an action.*** The passenger ***chooses*** their action and the consequence is a direct result.

If the passengers remain seated, keep the noise level down and keep their hands and feet to themselves they will have a safe and pleasant trip. That is a good consequence.

Whenever you are addressing a passenger regarding their poor choice, always remind them that it was their choice to do what they did, therefore the consequence is a direct result of their action. This consequence must be applied consistently each time and equally to every passenger.

When giving passengers a warning, use a strategy involving ***“progressively negative choice”***. This means that they have a choice, one is more unpleasant than the other.

An example would be “You can remain seated for the balance of the ride to school or you can move up to the front seat. What is your choice?” The passenger is allowed to maintain their dignity by making a choice and they will usually choose to stay seated in their seat. If they do not – remember it is still their ***choice***. The consequence for making a poor choice is moving to the front seat of the bus.

Passenger’s responsibilities and consequences should be posted in the bus and reviewed at school start-up and after every major holiday, or whenever a need arises.

Do not touch a passenger except to restrain them from hurting other passengers or themselves.

A congratulatory *high five* is acceptable, and even a good idea, if recognizing some special achievement.

Acceptable Consequences Are:

1. warning
2. assigned seat
3. conference with the bus operator – (*should be in private and not in front of the other passengers*)
4. communication notice/conference with the principal, or
5. conference with the principal/suspension recommended

Most actions will stop with a warning. If they do not, after three warnings the consequence would move to the next stage, an assigned seat. The assigned seat is usually front passenger side of the bus. Never move a passenger to the back of the bus when applying a consequence.

The severity of the consequence is in direct relationship to the severity of the action. More serious incidents such as fighting would necessitate going immediately to number four of the acceptable consequences above involving the school principal.

When having a conference with the passengers do not “nag”. We sometimes have a tendency to over-explain ourselves and that just turns the passenger off. If you have reviewed passenger responsibilities, then the passengers know why they have to be seated. Instead, ask the question “*What could happen to you if you are not seated and the bus has to suddenly stop or swerve to avoid something on the road?*”

This reaffirms their knowledge of the responsibilities and then you can ask, “*Why did you choose to stand up?*”

While unlikely, there could be a good reason. If so, then you can take that into account. If not, then you can again remind them of the poor choice they made and ask them what they are going to do to correct the behaviour. If they come up with a good solution, great – since it is their solution there is a better chance that it will work. If it doesn’t work, then move to the next step in the consequences.

When having a conference with a passenger, you should be at the school, standing outside of the bus, and have another adult present (if possible). If other passengers are milling around, take the passenger into the school and ask if there is a room in which you can talk to the passenger. Do not close the door.

Sometimes you will have a passenger that will be very compliant and sit down immediately when asked, however what is important to the operator is not always that important to the passenger and within a short period of time they may forget, or choose to ignore your request.

Monitor their attention time-span, if they are only able to stay focused for three minutes, then at two minutes 30 seconds say, “Thank you for remaining seated”. It reinforces, in a positive way, what is required. This not only makes the passenger feel better – *you will too*.

POINTS TO REMEMBER:

- 1. It is extremely important that all passengers have assigned seats.** In some school districts in Alberta assigned seats are mandated by contract.

Other reasons for assigned seats are:

- in the event of vandalism, you will know who sits in that seat,
- assigned seats will aid in discipline concerns – you will be able to move passengers who seem to be in conflict with each other or feed off of each other’s energy,
- and most importantly – in the event of an emergency you will be able to account for each passenger on the bus.

When assigning the seats remember that there is a normal “pecking order” and it is usually wise to let the passengers pick the seats they would like. One exception would be the Kindergarten and Grade 1 passengers who are usually seated at the front of the bus.

Some parents may request that their Kindergarten or Grade 1 passenger sit at the back with an older sibling. Explain that when the younger passengers are at the back of the bus you cannot protect them from the language and actions of the older passengers. If it's necessary for the siblings to sit next to each other, then the older passenger should sit up front with their younger sibling.

Once the passengers have chosen where they want to sit, inform them that if there are any discipline problems, you will make the necessary adjustments to the seating plan.

The seating assignments should be done after three or four days on the route (except for Kindergarten and Grade 1 – they are immediate). This gives you a chance to monitor the dynamics of the bus. The seating plan should be kept updated and together with your routing information at all times.

2. **When driving in an area where bus passes are required, the passes must be checked a.m. and p.m.** Some operators say, "I know my passengers, why should I check daily?" Once passengers are aware that you are not checking, they can loan or sell their pass to other passengers on other buses. More importantly, in the event of a collision all of the names have to be documented, this daunting task is much easier if you can read the names on the bus passes.
3. **You will never refuse a ride to a passenger who does not have a bus pass.** In the a.m. it could be a passenger just assigned to your route. In the p.m. when you are still at the school, you should check with the school supervisor for instructions.

If a regular passenger does not present the pass, warn them three times and then report to the school to see what action the school will take. Each school district has different procedures to follow. Discuss with your supervisor

4. **Reinforcement of good behaviour by positive praise is the most effective tool in improving passenger behaviour. *Keep in mind that food treats are not acceptable or effective.*** With the many food allergies that passengers could have, you could be held liable if a passenger has an allergic reaction.
5. **The question of having food or drink on a bus varies between jurisdictions. However, the policy of no food or drink has its advantages.** The dangers of choking and allergic reactions increase dramatically in the confined space of a moving school bus. If passengers are not allowed to eat or drink on the bus, there should be no need for a garbage box.

The general rule is that if passengers bring it on the bus, they can take it off. This helps immensely in keeping the bus clean.

But don't forget that if a bus operator enforces the no food or drink rule, then the bus operator must also be bound by the same rule.

For charters, lunches may be consumed prior to departure or on arrival at the venue. In the event that a passenger has a medical emergency or requirement, such as diabetes, that necessitates the consumption of food during the ride to or from school, pull over in a safe area until the snack has been consumed.

PROMOTING DISCIPLINE AND RESPONSIBILITY

The key to promoting discipline and responsibility is promoting passenger ...

SELF CONTROL

The following method promotes responsible decision making.

When a passenger is misbehaving, they are in a negative mode and we have to interrupt that thought process. Approach the passenger, without invading his or her personal space, and calmly and firmly say

STOP and THINK

This prompt interrupts negative and impulsive behaviour. It also aids self-control as passengers internalize and apply to themselves.

“Stop and Think” is a calm, rational, consistent response to challenging behaviour. It reduces the tendency to yell and/or respond emotionally to passengers.

Immediately follow with...“Are you going to make a good choice or a bad choice?”

This question places responsibility for their decisions squarely upon the passenger. It is clear that consequences are derived from choices made by the passengers.

STOP and THINK!!!

Ask the question

Are you going to make...

A BAD CHOICE? or a GOOD CHOICE?

If the passenger opts for a good behavioural choice say “**Just do it!**” If they opt for a bad behavioural choice then there are clearly understood consequences.

It is imperative that meaningful consequences accompany passengers’ behavioural choices. If the passenger maintained his “good” choice – give positive reinforcement – “**Well Done**”

Power struggles, and win or lose situations generated by student defiance are usually diffused by the operator remaining calm, and saying “*stop and think, are you going to make a good choice or a bad choice?*”

BULLYING

When establishing the passenger’s responsibilities it is important to include the problems associated with bullying. Every child has the right to feel safe at home, at school, in the school bus and in the community.

Bullying is not a normal part of growing up. It doesn’t usually go away on its own and often gets worse with time.

In Canada, one in five children is bullied; one in 12 youth are regularly harassed in school by other students (Gladue, (December, 1999). Province strives for safe and caring schools.

Alberta Sweetgrass, 15.

Bullying needs to be dealt with immediately. To stop hurtful behaviour, we all need to respond when it occurs and take steps to prevent it.

The first step is recognizing when there is a problem. This can be extremely difficult for a school bus operator while, at the same time, manoeuvring a very large vehicle through traffic.

The following will help you recognize the children most at risk:

- submissive
- shy, reserved, quiet, sensitive
- the youngest or smallest
- unwilling to stand up for themselves
- exhibits annoying behaviours
- expresses emotions quickly
- new kid on the block

- previously traumatized
- rich or poor
- from an ethnic minority
- gender/sexual orientation

Once you identified the possibility of a child being at risk, early intervention may prevent a situation from occurring. Quite often you can change the dynamics of a group by simply changing the seating arrangement. Never hesitate to ask the school administration and staff for advice.

Types of bullying that you may encounter:

1. Physical:

- hitting
- kicking
- punching
- pushing/shoving
- stealing

Results: Can hurt a child’s body, damage belongings or make a child feel badly about them self.

2. Psychological:

(a) Verbal:

- insults
- name calling
- threats
- comments about how someone looks or talks
- comments about someone’s ethnicity (culture, color, or religion)

Results: Can make a child feel badly about himself or herself.

(b) Social:

- gossiping
- rumors
- ignoring
- not being included in group activities

Results: Can make a child feel alone and not part of the group.

Suggested Steps for Intervening in Bullying Situations:

- intervene immediately - stop the bullying behaviour as soon as you see it or become aware of it
- talk to the bully, and talk to the victim, **separately**. If more than one child is involved in perpetrating the bullying, talk to each of the perpetrators **separately**, in quick succession. Whenever possible have another adult in attendance
- consult with school administration or the child’s parent or guardian to get a wider reading of the problem, and to alert them to this issue; get advice as to how this situation fits with school and board policies, and/or refer to written guidelines
- expect that the perpetrator(s) will minimize and deny their actions and responsibility
- tell the bully why their behaviour was unacceptable; tell them what behaviour you do expect of them
- inform the bully of the consequences that will be imposed in the event of another incident, and
- reassure the victim that all possible steps will be taken to prevent a recurrence.

Most bullying happens when you are not looking. When you are told about it, take it very seriously since children usually go to adults with these problems only as a last resort.

Do not ask the child who reports being bullied “What did you do first?” Bullying is not the victim’s fault.

Every child has the right and need to feel safe, and as an adult caring for children we have an obligation to stop and break the bullying cycle.

Information on bullying was obtained from Public Safety and Emergency Preparedness Canada web site.

For more information on bullying, see the Alberta Government Children's Services website at: <http://www.bullyfreealberta.ca/>

ADDITIONAL TIPS FOR EFFECTIVE PASSENGER MANAGEMENT

Establish and review bus passenger responsibilities

When establishing responsibilities they should be:

- concise and easy to understand for all ages
- very specific - telling the passengers exactly what they are to do
- limited in number.

What do you expect from your passengers?

Once the responsibilities have been established, it is important to discuss with your passengers what is expected of them in respect to their bus behaviour.

It is very difficult for a passenger to be responsible if they do not understand their responsibilities, or if they are different from those at home.

Therefore, the responsibilities should be:

- discussed with passengers - they may need to be reminded from time to time
- sent home so that parents or guardians understand what is expected behaviour on the bus
- posted in the bus
- discussed with school staff and appropriate supervisors to ensure uniformity with school expectations as well as expectations on other buses.

Consequences

Along with responsibilities go consequences. What will you do if one of your passengers neglects their responsibilities?

This may depend on the severity, the number of previous offences as well as the current situation. Remember, there are always two sides to any story and you may need more information to fully understand what occurred.

Establishing a set of consequences ahead of time will give the operator a plan of action.

Consequences should be:

- something the passengers do not like
- something you are comfortable with
- not physically or psychologically harmful to passengers
- used only to enforce the rules
- posted in the bus and discussed ahead of time with passengers, parents, and school staff
- arranged by severity from minor to more severe, and
- always applied consistently and fairly to all passengers facing this consequence.

Consequences must also contain a severe clause for severe behaviour that must be dealt with instantly to protect others on the bus.

Pulling the bus over in a safe area or returning to the school may be necessary to deal with severe problems. Consult with your supervisor on the best way to handle these serious problems.

Rewards

Since passengers who misbehave have negative consequences, passengers who behave should have positive consequences or rewards.

Positive rewards can change the atmosphere of an entire bus and make passengers look forward to the ride.

Positive rewards can be:

- something the passengers like
- age appropriate items such as stickers or music
- praise by the operator

A positive reward, once given, belongs to the passenger and should never be taken away.

“Catch kids being good!”

DEALING WITH CONFLICT

How can you, as an operator, deal in a professional manner with conflicts that arise and not “lose your cool”?

We have established responsibilities, rules, consequences and positive rewards so that the operator has an action plan. Putting that plan into action requires additional skills.

Have An Assertive Attitude.

Assertive operators:

- are self assured, stay calm and use normal tones (with authority) and volumes in speech; do not yell, scream, swear or name call
- say what they mean, mean what they say and then follow through by doing what they say
- are always prepared to handle any behaviour problems that occur on their bus
- take the attitude that “no passenger will stop me from driving a safe bus”; and
- take the attitude that *no passenger will stop another passenger from having a safe and pleasant trip.*

Broken Record

Learn to use the “broken record” method to prevent arguments:

- know what you want the passenger to do
- tell the passenger what you want
- if an argument ensues, repeat what you want, up to three times; and
- if the passenger still does not do it, then use a consequence.

Bus Operator’s Story:

First day on the route a student was kneeling facing the back of the bus. Using the broken record technique I asked the student to turn around and sit down. He replied “You can’t make me do anything.” For the second time I asked him to turn around and sit down. He replied “Who do you think you are? My dad says I don’t have to listen to you.” Again I repeated my request to turn around and sit down. He gave me this big sigh and got out of his seat, turned around three times and then sat down. His actions taught me two things, one the broken record technique works and two to minimize my instructions. Obviously to sit down he had to turn around so why make it part of the request.

Always tell a passenger what it is you would like them to do, not what they are doing wrong.

Keep In Contact With Parents and the School

Part of your school district’s progressive consequence plan may be to fill out a misconduct report for the school as well as contacting the parents. Should your actions ever be questioned by either the school or the parents, keeping a detailed record of behaviour incidents on a daily basis in a separate notebook would be very helpful.

Many problems on a bus can be corrected with a simple call to parents (if that is allowed in your jurisdiction).

When contacting a parent always be professional, diplomatic, and do not discuss other passengers. Your concern is always the safety of **their** child on the bus.

If a different seating arrangement in the bus and a call to parents does not change the behaviour problem then the school administration needs to be informed. This can be done with a conference with the principal and/or a misconduct form.

Keeping in contact with parents and school also means informing them of good passenger behaviour - particularly if a passenger's behaviour has improved.

Using Misconduct Reports

Each company or jurisdiction may have their own misconduct report or form. A sample is provided in this series. Misconduct reports are quite often a last resort for operators and may accompany the notes the operator has been making on this passenger to back up the report.

IMPORTANT: As an operator, you do not have the authority to suspend a passenger's busing privileges.

Only the school principal may suspend a passenger's bus privileges. Serious behaviour problems cannot be solved on a school bus. In situations that are severe, such as drugs, alcohol, smoking or injuring another child, a suspension of bus privileges is usually recommended by the operator and enforced by the school.

Always touch base with the school administration and your supervisor as soon as possible.

Discipline Must Be Consistent

The same rules and consequences apply for every one, every day.

Guideline for Dealing with Conflicts:

- allow the passenger to propose their own solution to the conflict if this is acceptable to all parties.
- let the passenger make the choice to behave or face clearly explained consequences
- however you deal with it, you should strive to leave the dignity of the passenger and operator intact; and
- do not yell – if you yell, it is a sign to you and your passengers that you are out of control.

If you have pulled the bus over to the side of the road, and need to speak with a passenger, do so in a quiet and controlled manner. The passenger will have to listen and the other passengers will become very quiet because they want to hear what is going on.

When you yell, passengers just turn you off plus they know how to get you upset or have you lose control.

Remember that there is no such thing as a bad child; it is only their actions which are bad!

You may not be able to solve all conflicts and behaviour problems on your bus. Keep in mind that your main objective is the operation of a safe bus to deliver passengers to their destination.

While discipline problems can make a good operator quit, a great operator deals with the problems in a professional manner.

Communication Report

This form is to be used to improve communications between bus operators and school principals to ensure awareness of unacceptable behaviour problems with passengers while being transported to and from school. It is meant to assist both operators and principals in dealing with discipline problems.

SCHOOL BUS ROUTE: _____ DATE: _____
OPERATOR'S NAME: _____
NAME OF PASSENGER: _____ TIME: _____
SCHOOL: _____

TYPE OF BEHAVIOUR (Please provide a detailed report outlining the specific incident.)

ACTION TAKEN BY THE OPERATOR:

ACTION TAKEN BY THE PRINCIPAL:

DATE: _____ SIGNATURE: _____

Bus Operator Side

Door Side

Seating Plan

Row 1					
Row 2					
Row 3					
Row 4					
Row 5					
Row 6					
Row 7					
Row 8					
Row 9					
Row 10					
Row 11					

SERIES 2.2: PASSENGER MANAGEMENT

REVIEW WORKSHEET

1. Name three acceptable consequences that can be utilized when students misbehave.
2. What is one of the most effective tools that you can use to improve student behavior?
3. Name three objectives related to student improvement that an operator should seek to attain.
4. You have ongoing problems with a student who persists in using inappropriate language and will not remain seated when the bus is in motion. You have moved the student to the front seat, given the student a number of verbal warnings and spoken to their parents but it has not made a difference. What might be the next step in the process?

SERIES 2 – GLOSSARY OF TERMS

Term	Definition
Alternately Flashing Warning Lamps (eight light system, eight ways, overhead lights, warning lights, wig wags, student loading lights)	<ul style="list-style-type: none"> – red: warn other road users that the bus is about to load/unload passengers – amber: warn other road users that the bus is about to stop to load/unload passengers
Country Turn Around	– procedure for turning around on a two lane highway when other options are not available or practical
Crossover Mirrors (cats eyes, dolly partons)	– used to view the area immediately in front of the bus
Cross Over Procedure (left side loading/unloading)	– procedure for loading/unloading passengers onto the opposite side of the road
Interior Rear View Mirror (passenger mirror)	– provides the driver a view of the bus interior
Manual Switch	– the manual switch activates the amber flashing lights used for passenger loading
Master Switch	– the switch which controls power to the alternate flashing warning lamps
Rear View Mirrors (side view mirrors)	– used to view the areas to the sides and to the rear of the bus
Safety Zones	– designated waiting areas assigned to ensure passenger safety prior to loading and following unloading
School Administrator	– the school principals or designate responsible for operation of a school
Service Door (passenger door)	– front door normally used by passengers during loading and unloading procedures
Step Well Lamp (step well light)	– illuminates the entrance steps when the passenger entrance door is opened
Stop Arm/Stop Sign	– stop sign on left side extends and flashes while the alternately flashing red lights are on
Passenger Crossing Arm (crossing arm)	– minimum 70" front bumper arm that extends fully whenever the school bus stop arm is activated
Passenger Loading (loading; intake)	– term used when passengers are in the process of embarking (getting on) the bus
Passenger Management	– control and discipline of passengers to ensure the safety of the bus and its passengers
Passenger Unloading (unloading; outtake)	– term used when passengers are in the process of disembarking (getting off) the bus



SERIES 3

Bus Manoeuvres / Defensive Driving

SERIES 3

Bus Manoeuvres / Defensive Driving

SERIES 3.1: Bus Manoeuvres

INTRODUCTION

This series is designed to give you more information to become a professional school bus operator. In order to do this you not only need the information but also a great deal of practice.

By continuing to improve our driving skills, all road users will benefit. In this Series we will cover basic driving techniques and the key elements of “Defensive Driving”.

During your daily travels, you will need to further develop skills such as:

- lane positioning
- steering and turning
- stopping and parking on a hill
- starting on a hill
- emergency driving techniques; and
- railroad crossings.

LANE POSITIONING

Selecting the proper lane, positioning yourself within the centre of the lane, and then making adjustments to your position to suit the current circumstances is a skill that requires a great deal of practice.

As you continue to practice you will improve your ability to maintain adequate separation distance between your bus and other vehicles and pedestrians.

On a multi-lane highway, it is recommended that buses should position themselves in the right lane or the lane closest to the shoulder of the road. This will leave you an “out”, to the right, if you need one to avoid a collision.

STEERING AND TURNING

As you are no doubt aware, operating a school bus is considerably different than driving a standard size automobile. It generally requires a lot more room to perform the same types of manoeuvres. In addition, traffic patterns are becoming more complex, particularly in cities, necessitating added skill and judgment on the part of the school bus operator to turn and position the bus safely.

Before making a turn, make certain you check traffic to the front, sides and rear of the

bus by using the proper technique of mirror/shoulder/signal/shoulder check and that you are in the correct lane for the turn.



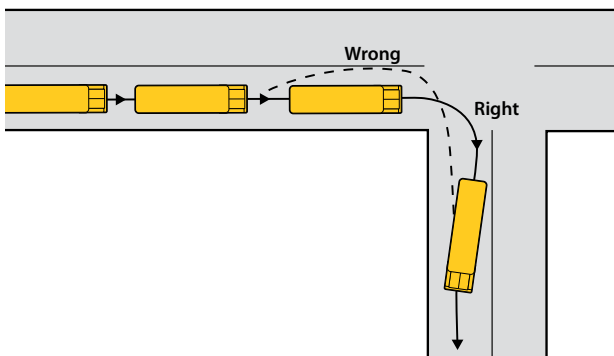
During a turn, the hand-over-hand steering method is the best to use. One hand pushes the steering wheel up, across and down, while the other hand reaches up to the top of the wheel and pulls down. This action is repeated grasping the wheel at the top again.

If you were trained in the shuffle or push-pull method of steering, and are comfortable using it, then continue to use that method. The key is to ensure that the bus is under control at all times.

Note: *Letting the steering wheel spin freely when recovering from a turn is **not** acceptable. You must stay in control even when recovering from a turn.*

Making turns:

- give the proper right or left turn signal approximately 30 metres from the turn in urban areas or approximately 100 metres in rural areas
- reduce speed and downshift to the proper gear needed to execute the turn
- position the bus in the appropriate lane, depending on the direction of the turn
- check for clear right-of-way by looking for potential conflict with other traffic, cyclists or pedestrians
- check for traffic signals or signs that are directed at you plus be aware of signs or signals applying to cross-traffic
- if stopped waiting to turn left, keep your front wheels pointed straight ahead and the brake pedal depressed to ensure:
 - a) your brake lights are on and you are stopped.
 - b) if struck from behind, you will not be pushed into oncoming traffic.



- execute the turn
 - turning left - take the left-most lane available (unless directed otherwise by arrows on a traffic sign or markings on the road surface)

- turning right - take the right-most lane available
- on a dual-lane left turn, it is preferable to use the outer (right-most) left turning lane
- never shift gears during a turn
- make the turn smoothly
- check the left and right mirrors as you are turning for bus body swing and clearance
- check that your turn signal has been cancelled once the turn is complete; and
- after completing a left turn on a multi-lane road, resume speed, activate your right turn signal and move into the right lane as soon as practical.

REVERSING

Reversing a school bus improperly is a leading cause of school bus collisions. This is why reversing should be avoided whenever possible. There are, however, cases in which it may be necessary.

For reversing on school grounds or locations adjacent to school grounds, the **Use of Highway and Rules of the Road Regulation** states the following:

Backing up on a school ground, etc.

74. A person driving a school bus shall not back up the school bus when the school bus is:

- (a) on a school ground, or
- (b) at a location adjacent to a school ground at which the school bus is loaded or unloaded,

unless there is a responsible person located outside at the rear of the school bus giving directions with respect to the backing up of the school bus.

When it is necessary, there are two types of reversing you must be able to do:

1. reversing in a straight line; and
2. reversing with a turnaround, which was discussed in Series 2, Loading and Unloading Procedures.

Reversing In a Straight Line

- direct a “responsible person” (required by law if on or adjacent to school property) to stand near the rear of the bus, on the operator’s side to give signals
- also, check that the way is clear using both mirrors and a shoulder check; if you do not have the assistance of a responsible person (required if on or near school property) and the view is not clear, get out of the bus and walk around it to identify any obstacles that may be present; and
- shift the transmission into reverse gear, sound the horn once for every bus length, back slowly and smoothly in a straight line constantly checking both mirrors.

STOPPING YOUR VEHICLE

Inexperienced operators are seldom aware of the total stopping distance or time it takes to bring a bus to a full stop. Consequently, they may make errors in their decisions which, in turn, could result in a collision.

There are three factors that determine how long it takes for a vehicle to stop. They are:

- perception time
- reaction time; and
- braking time

Perception time is the time it takes for an operator to see a situation and understand that there is a reason to stop the vehicle. The average person’s perception time is approximately 3/4 of a second.

Perception time and the distance travelled in this time will vary slightly from operator to operator. Less experienced operators are often slower to realize a danger exists. Also, the distance will vary greatly depending upon the operator’s visual search, level of attention, decision-making capability, degree of fatigue, and many other vehicle and/or environmental variables. Use of alcohol or other drugs, prescription or over-the-counter can also have a major effect on a person’s perception time.

Reaction time is the time it takes the operator to physically react to the decision to stop by releasing the gas pedal and by moving the right foot to the brake pedal. The average person’s reaction time is 3/4 of a second. The reaction distance is how far a vehicle travels during the reaction time.

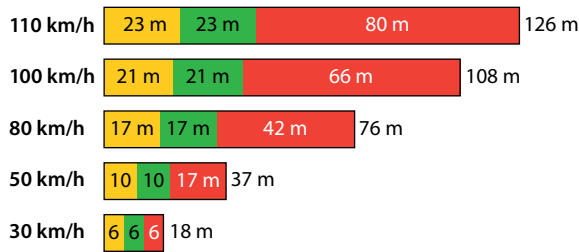
Braking time is how long it takes a vehicle to stop from the time the brakes are applied until the vehicle actually stops. How far a vehicle travels during this time is called the braking distance.

The **total stopping distance** is the sum of the perception distance, the reaction distance and the braking distance.

Many factors such as the condition of the road, your vehicle, the vehicle’s speed and your vehicle’s condition and ability to stop, work in combination to determine total stopping time and distance. As an operator, you must attempt to minimize these factors to avoid a collision. This is also why it is important to not drive when you are tired or have been taking drugs or alcohol.

The chart below illustrates the minimum stopping distance for various speeds. The stopping distances are averages for stopping on smooth, dry pavement.

Stopping Distances Under Normal Road Conditions



- Distance travelled while perceiving the need to stop (based on average perception time of 3/4 second)
- Distance travelled while reacting (based on average reaction time of 3/4 second)
- Distance travelled after brakes applied (under normal road conditions and brake efficiency)

Other Tips for Stopping

- it is the total stopping distance that increases dramatically as your speed or load increases. For example, a 66 passenger bus at 45 kg (100 lbs) per passenger equals 3000 kg (6600 pounds) over the weight of the vehicle itself. It will take dramatically longer to stop this loaded bus than the average car
- when coming to a stop, do not leave your braking too late
- ease off the accelerator in advance of your stop to begin reducing your speed; and
- to brake smoothly, ease up on the brake pedal slightly just before coming to a full stop and then reapply pressure on the pedal to come to a complete and final smooth stop.

Stopping and Parking on Hills

- check for following traffic using side mirrors and signal to pull over to the curb or edge of the road
- downshift, if necessary, to reduce speed in preparation to stop
- apply brakes lightly at first (on a downgrade you should probably tap the brakes with your right foot a couple of times) and then apply firm, even pressure for a smooth stop
- depress the clutch as you are near a stop; and when stopped, shift to neutral
- allow extra room between vehicles for safety
- turn wheels into the curb on a downgrade; away from curb on an upgrade. Ensure front tire makes gentle contact with the curb. If no curb, always turn the wheel to the right on either up or down hill grades; and
- set the park brake and turn off the ignition. Remove keys.

Starting on a Hill

Starting on an upgrade in a bus with standard transmission can be difficult even for the most experienced operators, particularly in areas with heavy traffic. On less steep grades and with considerable experience, it may be possible to use the normal starting procedure.

The recommended procedure for starting on a hill, however, requires that you use the parking brake as outlined here.

- when stopped on a hill the parking brake should already be engaged
- depress the clutch and shift into the appropriate gear
- grasp the parking brake handle
- release the clutch slowly to the friction point while gradually depressing the accelerator

- release the parking brake as the clutch begins to grab, depressing the accelerator as necessary, and finally, removing your foot from the clutch. With practice this will become a smooth single action.

Note: *Starting on a hill should be practiced without passengers on board and in an area with little or no traffic. Practice until you can repeatedly start on an uphill grade smoothly without rolling back.*

RAILROAD CROSSINGS

Although many people fail to realize it, crossing railroad tracks represents one of the greatest hazards in school bus transportation with respect to the potential for mass casualties and fatalities.

It only takes one thoughtless moment to cause a major disaster with a train. Consequently, it's easy to understand why the law requires school buses whether empty or loaded to come to a complete stop before proceeding across an **uncontrolled crossing**.

Uncontrolled crossings are those that have no mechanical flashing signals or other signaling devices.

By law, as an operator of a school bus, you are required to stop at a railway crossing unless:

- the crossing has a traffic control signal (lights and bell)
- a peace officer or flagman directs you to proceed; or
- the council of a city may, by bylaw, state that a stop is not required at a railway crossing that is not controlled by a traffic control signal to all or any railway crossings located within the city.

The procedure at a railway crossing not controlled by a traffic control signal is as follows:

Prepare To Stop

- slow down, gear down, have the vehicle under control
- if in the left lane of a multi-lane highway, signal and change to the far right lane well in advance of the crossing
- before reaching the crossing, request that your passengers be quiet. You should also turn off any heaters, fans or radios to permit you to listen for an approaching train; and
- as you get closer to the crossing, take in the "big picture"; check for control devices, trains, railcars on the tracks and traffic behind you.

Note: *The alternately flashing red or amber lights on the school bus must **not** be used when stopping at a railway crossing.*

Bring the Bus to a Complete Stop

- the bus should be not less than five metres and not more than 15 metres from the nearest rail

Secure the Bus

- set the parking brake
- shift transmission into neutral
- maintain pressure on the brake pedal

Look and Listen

- open the front door and the operator's left-side window
- carefully look in both directions, listen for the sound of an approaching train
- don't be in too much of a hurry; make absolutely sure you take the time to check very carefully for an approaching train; and
- if there is no indication of an approaching train, shift the bus into the appropriate gear, close the door and release the parking brake.

Proceed Across the Tracks

- when you are absolutely certain that it is safe to cross, proceed quickly and smoothly **without shifting gears on the tracks.** Never attempt to shift gears while crossing railroad tracks in order to minimize the chance of stalling or not being able to get the transmission into the next gear while on the tracks; and
- once completely across the tracks, close operator's window. Fans, heater and radio can be turned on again.

Note: *It is against the law to change gears crossing railroad tracks.*

Multi-Track Crossings

- when crossing multi-track crossings, make certain there are no trains approaching before crossing any of the tracks
- after a train passes on a multi-track crossing, wait until all tracks become visible in both directions before proceeding. A second train may be approaching from the opposite direction

Procedure at Obstructed Railway Crossings

If bright sunlight, fog, snow, smoke, or other obstructions make it difficult for you to see, walk to the track to see if you can cross the track safely.

Note: *As the operator of the school bus, you must never leave the bus without first turning off the engine, setting the brakes, putting the transmission in its lowest gear or park position and taking the key out.*

When you are sure that it is safe and that no train is approaching, return to the bus and proceed across the tracks as mentioned above. Be alert for a fast moving train that may have approached during the time it took you to return to the bus, start it and begin moving forward.

Railway Crossing Safety Information

Because of the high risk of death in collisions involving trains, this segment has been added to furnish the bus operator with further information regarding railway crossings.

The following information was derived from the Operation Lifesaver Program, Direction 2006 and the Transportation Safety Board of Canada.

Crossing Collision Statistics 1992 - 2004			
Year	Collisions	Fatalities	Serious Injuries
1992	386	73	N/A
1993	379	56	80
1994	391	54	64
1995	379	53	75
1996	365	46	69
1997	307	32	60
1998	273	39	43
1999	283	37	44
2000	263	33	33
2001	278	41	47
2002	261	46	42
2003	250	28	52
2004	237	25	50
2005	270	38	54
Source: Transportation Safety Board of Canada			

- from December 2005 to November 2006 in Alberta, there were 52 collisions, four fatalities, and eight serious injuries in rail/highway crossing incidents
- almost half of all rail/highway crossing collisions occur at crossings equipped with flashing signals and bells or flashing signals, bells and gates!
- approximately 40 per cent of all rail/highway crossing incidents involve a vehicle running into a train

- rail/highway crossing collisions are potentially the most severe type of collision. They are at least 15 times more likely to result in death than any other collision
- The major cause of rail/highway crossing collisions is the failure of motor vehicle operators to stop or exercise due care and attention or to observe and comply with existing laws and regulations

Railway Facts:

1. An approaching train activates flashing light signals and gates approximately 20 seconds before the train reaches the crossing.
2. An eight car passenger train travelling at 100 km/h requires about 1070 metres or one kilometre to stop. When travelling at 130 km/h, a stopping distance of about 1825 metres or 1.8 kilometres is required.
3. The average 150 car freight train travelling at 59 km/h needs about 960 metres to stop. At 100 km/h the same freight train needs about 2,500 metres or 2.5 kilometres to stop.
4. An automobile travelling at 100 km/h requires about 108 metres to stop.
5. The average locomotive weighs 110 tonnes.
6. The average loaded boxcar weighs 70 tonnes.
7. The average automobile weighs less than two tonnes.

Highway/Railway Crossing Facts:

1. There are approximately 23,000 public railway crossings in Canada, of which about 30 per cent have flashing signals or flashing signals and gates. 50 per cent of all crossing collisions occur at signalized crossings which are those exposed to the highest level of highway and rail traffic.
2. Except where there is a municipal ban on use of the train's whistle, trains are required to sound their whistles at least 400 metres before entering a public level crossing. At crossings equipped with a warning sign or cross-bucks, the train whistle is the best warning available to indicate an approaching train.
3. The speed of a train over a highway/railway crossing depends on several factors including the volume of rail traffic, track curvature, sight lines etc. On high-speed lines, freight trains can pass over a crossing at 105 km/h and passenger trains at 162 km/h.
4. If every public crossing in the country were to be equipped with flashing signals the cost would exceed two billion dollars. This is still not a guarantee of safety since half of all crossing collisions occur at signalized crossings.

10 Tips to Save Your Life at a Railway Crossing

1. Be prepared to stop at all highway/railway crossings
2. Look for the cross-buck symbol of a highway/railway crossing. The higher traffic highway/railway crossings generally have signals and bells. Some also have gates across the road.
3. Listen for warning bells and whistles. Turn off, or down, distracting fans, heaters and radios. Ask the passengers to be quiet until the bus has safely crossed the tracks. Opening the window helps you hear.
4. Always obey the signals. Never attempt to drive under a gate as it is closing, or around a closed gate. If the gate begins to close while you're underneath, keep moving ahead until you clear the crossing.

5. If a police officer or railway personnel are directing traffic at the crossing, obey their directions.
6. If one train passes, make sure that a second train isn't approaching on another track. They can, and they do!
7. Cross the tracks in low gear. Never attempt to change gears while crossing.
8. If your vehicle stalls on the tracks, get out quickly and away from the vehicle and the tracks. Keep well away, but move generally in the direction of the approaching train to avoid being hit by debris, because your vehicle and debris from the train hitting your vehicle will be swept forward by the momentum of the train.
9. If your view is obstructed for 300 metres in either direction, do not attempt to cross the tracks until you are certain that no train is approaching. Be especially careful when crossing tracks during bad weather.
10. Walking or playing on train tracks is extremely dangerous and illegal. The only safe way to cross railway tracks as a pedestrian is to use designated crossings, and to obey all signs and signals.

Be Smart, Be Safe, and Stay Alive! Train Time is Anytime!

COMMON OPERATOR ERRORS AT CROSSINGS

- Because of its size, it is easy to misjudge the speed and distance of an approaching train.
- Never try to beat a train to the crossing. Many vehicles have been hit by the train or have run into the side of it when trying to get across the tracks ahead of the visibly approaching train.
- When the train clears the crossing, the operator should not immediately proceed across the tracks without first checking for other trains. Operators must be patient and wait for a train to proceed a sufficient distance to allow for good visibility in both directions.
An operator should never attempt to cross tracks while the flashing signals are still operating. If the signals are on and there is no train in sight, it may be approaching at high speed but is just not yet visible or possibly there could be a malfunction in the system. (The cross-buck has the phone number to call for repair and a number that indicates the location of the track).
- The signals may be malfunctioning in the **off position** and a train may be approaching the crossing – always be prepared to stop when approaching a railway crossing, even one where signals are present but not activated.
- Familiarity breeds complacency. Always remember the saying, “Anytime is Train Time!” When approaching a familiar crossing that normally never has a train on it, the operator should still be alert for a train since their schedules can change from day to day.
- Operators should reduce speed and be especially observant if weather conditions or sight observations limit visibility of the rail/highway crossing and/or approaching trains. Some tracks may have curves and be hidden behind trees or hills which would make a train approaching a high speed difficult to see and react to ahead of time.
- Always use extreme caution. Take your time. Be 100 per cent sure it is safe before crossing any railway track whether signalized or not.

SERIES 3.1 BUS MANOEUVRES**REVIEW WORKSHEET**

1. The three primary factors which determine how long it will take to stop a vehicle are:
2. When making a left or right turn the driver should signal approximately _____ metres from the turn in urban areas and _____ metres in rural areas.
3. You are backing your bus in an area where your view is restricted. What two things might you do before backing?
4. You are traveling down dry smooth pavement at 80 kilometres per hour and have to stop for a deer that has jumped into your path. Based on perception, reaction and braking times, the minimum stopping distance would be _____ metres. What other factors could increase the stopping distance?
5. The saying, “Anytime is Train Time” attempts to point out that when approaching a familiar railway crossing, complacency may occur. A school bus driver is always required to perform standardized procedures at uncontrolled crossings. What is the primary purpose of these procedures?
6. When securing your bus at an uncontrolled railway crossing you maintain pressure on the brake pedal because:
7. When stopping your bus at an uncontrolled railway crossing the bus should be not less than _____ metres and not more than _____ metres from the nearest rail.

SERIES 3.2: Defensive Driving

INTRODUCTION

The definition of “Defensive Driving” according to the Canada Safety Council is:

“Defensive driving is driving to prevent collisions in spite of the incorrect actions of others and adverse conditions.”

Traffic collisions in Canada are a serious problem. Whether or not you have been involved in a collision, it’s the consequences that still affect you.

The facts are staggering:

- Each year Canadians are involved in over 650,000 motor vehicle collisions.
(That is 1,718 collisions per day or 74 collisions per hour.)
- Approximately every three hours someone dies in a traffic collision. That’s almost eight people killed everyday.
- Each year approximately 3,200 people are killed in traffic collisions.
- In the province of Alberta, during a one year period, the insurance industry paid out \$561,569,000 in claims and adjustment costs under the provisions of the private passenger car policies alone – more than \$1.5 million per day.
- One out of every three people living today will be involved in a crippling or fatal traffic collision during their lifetime.

These figures are appalling, but there is hope. Many organizations and individuals are attacking the problem in various ways.

By improving your knowledge and skills you can be part of the solution and hopefully avoid contributing to these statistics.

Studies have shown the average driver is capable of driving at least twice as safely as they currently do. No one driving today can afford to drive at half of their potential.

At the completion of this module, you will have gained insight and knowledge required for you to drive ‘S. A. F. E.’:

- S** **SEE** what is going on around you, to the front, the rear, the left and right. Don’t forget to also check overhead traffic signals or overhead hanging objects and the road surface beneath your vehicle.
- A** **ANALYZE** what you have seen. For example, don’t just ‘see’ children playing beside the road - analyze this information and recognize the potential hazard that exists should a child dart into your path. Remember, you are not just an observer; you are an active participant.
- F** **FIND** the way to avoid a hazard should a situation actually happen. To do this requires you to know what is happening around at all times. You do not want a plan which creates a second danger as you escape from the original hazard.
- E** **ESCAPE** by putting your plan into action should the dangerous situation develop.

THE PROFESSIONAL OPERATOR

While a properly maintained vehicle is a very valuable tool in the prevention of collisions, the most influential factor is the operator. It is the operator’s skills, knowledge, habits, attitudes, physical and mental condition that are factors in either being involved in a collision or being able to avoid a collision.

How can you become a 'Professional Operator'? It really involves no magic, but it does require a conscious effort until you have trained yourself to respond in an automatic manner.

What colour is a 'yield' sign?

Think about it for a few moments and we'll come back to it.

STEPS FOR AVOIDING HAZARDS

- **Identify**
You must be able to identify any potential hazards or dangerous situations.
- **Predict**
Predict what may happen next and all the possibilities.
- **Decide**
Decide which course of action you may need to take in order to avoid a collision.
- **Execute**
Put your plan into action.

It is important that you remain alert and consciously search for hazards as you drive. Both your survival and that of your passengers depends on your ability to identify the clues that indicate a potential or real hazard.

One of the most important aspects of defensive driving is recognizing impending hazards **BEFORE** they become a problem for you. Early recognition allows the time you need to avoid trouble. It is vitally important that you recognize and become **IMMEDIATELY** aware of what you see while driving.

This is what is meant by 'connecting your mind to your eyes'. It is thinking about the possibility that the ball rolling across the road may be chased by a child, or that a vehicle approaching on an adjacent road may not stop at a cross street. It also means not being so deeply lost in thought that that you fail to see a 'no turn' sign,

or a partially hidden railroad crossing up ahead. Use your **EYES** to see and your **MIND** to analyze what you see for potential dangers.

What is the first thing that came to your mind when asked what colour 'yield' signs are? Yellow?

If that is the case, you are not alone.

Yield signs have not been yellow since the late 1970s.

See picture of yield sign at end of Session 3

SIX CONDITIONS AFFECTING DRIVING

There are six conditions in any driving situation and your ability to adjust to any of them may prevent or create a collision.

1. light
2. weather
3. road
4. traffic
5. vehicle
6. driver

1. Light Conditions

- overdriving your headlights at night. The average headlights are only capable of illuminating the highway for approximately 100 metres.
- headlight glare at night. The human eye takes about seven seconds to recover from headlight glare and at 80 km/h a vehicle would travel 160 metres in those seven seconds
- sun glare in the morning, late afternoon or glare from the snow on a bright winter day; sunglasses and a clean windshield are essential for a professional operator.

2. Weather Conditions

Driving rain, snow, sleet and fog can all contribute to loss of vehicle control. These conditions can be dangerous because they affect other road users as well. Reduce your speed, drive with your headlights on and, if conditions are too bad, don't drive at all.

3. Road Conditions

Curves, gravel, valleys and hills all limit the speed at which you can drive.

4. Traffic Conditions

Many run-off-the-road collisions probably reflect the deliberate choices of some 'escape artists' who took a chance once too often. The defensive operator looks far ahead, anticipates traffic situations, uses good judgment and avoids getting into tight spots in the first place.

5. Vehicle Conditions

- bad tires blowing out
- bald tires unable to grip the road when needed
- defective brakes, poor steering.

6. Driver Conditions

- physically you are very dependant on your vision directly ahead of you as well as around you. Using your peripheral vision, you can see the 'big picture'. Keep your eyes moving to scan the road ahead, behind and to the sides. Every three to five seconds, check your rear-view mirror for any vehicles that may be following or trying to pass
- focusing your attention on your driving, although sometimes difficult, is imperative to your ability to avoid collisions. Your attention needs to be on the task at hand and avoid personal distractions. Make sure you are well rested before beginning your trip

- driving under the influence of any medication can affect your driving ability. When prescribed, ask your doctor what effect, if any, your medication may have on your ability to drive

Over the counter medication requires the same attention. Your pharmacist is a great resource for information on all and any side effects, especially if this is combined with prescribed medication

All new medications should be taken on a Friday evening or Saturday morning as this will give time for any side effects to show themselves without compromising operation of the school bus on a weekday

- alcohol in any amounts will impair your ability to drive. Many employers in Canada forbid employees from driving within 12 hours of consuming any alcohol.

Each of these conditions is critical on its own. However, you will seldom encounter a situation with just one of these conditions on its own. They tend to be grouped together, compounding the effect.

It is important that you learn to recognize when any or all of these conditions are adversely affecting your driving behaviour or ability. This means not driving until after the condition has improved.

What can you do to make sure these conditions don't surprise you?

At a very minimum, you should attempt to anticipate the conditions you are likely to encounter during your route. Take a '**Pre-Trip Mental Inventory**'.

Before you start, sit behind the steering wheel for a minute or two and run through a mental checklist.

PRE-TRIP MENTAL INVENTORY CHECKLIST:**Driver conditions:**

- am I fully rested?
- free from alcohol or other drugs?
- feeling fine and not ill?
- am I able to concentrate on driving?
- is my attitude courteous, careful and considerate?

Vehicle Conditions:

Have I completed my checks:

- under the hood?
- exterior?
- interior?

Condition of the Environment:

- light?
- weather?
- road?
- traffic?

After you have answered these questions appropriately, you have mentally prepared yourself for the driving conditions that you could encounter on the trip ahead.

BASIC COLLISION PREVENTION FORMULA

How does one become a defensive operator? It really involves no magic, but it does require a conscious effort to follow and practice the basic collision prevention formula, which is to:

1. recognize the hazard;
2. understand the defense; and then
3. act in time.

Most people continually go through the mental process of practicing the 'Basic Collision Prevention Formula' subconsciously while driving. However, there is a tendency for minds to wander and daydream; thus the process stops. By practicing the formula, your mind will stay focused longer and you will have developed an important tool for maintaining mental alertness.

Virtually every driving situation has potential hazards and in order to protect yourself it is not enough to just know what you are doing. You must also be aware of what is developing around you. The actions of others, the condition of the road, parked cars, visibility, *etc.*, are all part of that process.

Far too often we are lulled into a state of relaxed well-being when we drive thus our attention wanders. In this state we can easily miss the detection of a hazard. When this happens, an easily avoided problem can rapidly become a full-blown emergency.

It is important that you remain alert and consciously search for hazards as you drive. If you consciously practice hazard detection, you will soon develop the habit and become an 'automatic hazard detector'.

ELEMENTS OF DEFENSIVE DRIVING

In order to successfully avoid collisions, the professional operator requires a high degree of knowledge, alertness, foresight and must always exercise good judgment and skill.

Knowledge

This can come from many sources, including *Alberta Transportation's* driver licence operator handbooks and the department's *School Bus Driver's Guide*, along with other printed material and courses.

A great deal of knowledge about driving can be acquired through experience, but experience is not necessarily the best teacher as bad habits develop and are hard to break. Traffic safety experts are convinced that knowledge of driving should be acquired through a planned program, such as the one you are taking now.

Alertness

Alertness is the habit of keeping one's attention focused on driving and free of distractions. It includes the attitude of detecting hazards and the ability to avoid collisions. Being fully alert requires the use of vision, touch, smell and hearing to receive and interpret various messages. Mental alertness can be developed consciously and is improved with practice.

Foresight

This is the ability to anticipate and prepare for most eventualities. It consists of being able to assess traffic situations as far ahead as possible, to anticipate how they are likely to develop and to decide whether or not they will present a hazard.

Judgment

Good judgment implies recognition of the alternatives present in any traffic situation and the ability to arrive at a wise choice in time to avoid a collision. It is dependant on knowledge and experience and also intangibles such as common sense and intuition.

Skill

Skill is the ability to manipulate the controls of the vehicle to successfully perform basic traffic manoeuvres such as turns, passing, reversing, parking, *etc.* There is a correct way to do each of these. Skill is developed through learning how to do them the right way and then doing them the right way **every time.**

Good Habits

This means that you have consciously practiced the correct procedure to the point where you subconsciously do it right every time. Correct performance has become instinctive. Good visual habits, for example, are one of the most important tools available to the defensive driver.

THE PERFECT OPERATOR

Through courses such as this, we are striving to have all bus operators become 'perfect operators'. You may be safe in thinking that perfect driving is not possible, but let's consider what perfect driving means. The professional operator knows that perfect driving is achieved by having one perfect trip at a time.

A perfect trip is any trip characterized by the lack of one major trait: **Errors**. Error avoidance is the key to perfect driving.

There are several types of errors that may occur on any given trip.

Collisions

Both in terms of human lives and dollars, this can be the most serious error.

Traffic Violations

To have a perfect trip you must obey the law and drive defensively. A safe and professional operator has thorough knowledge and understanding of all traffic laws and general rules of safe driving.

This also entails understanding the rules established by your employer under company and/or school board policy. The rules of the road may also change from time to time and it is expected that a professional operator will know and be aware of these changes.

Operator's driver licence handbooks are available from any Motor Vehicle Registry office.

Along with the basic rules of the road, which apply to all drivers, professional operators must obey all additional laws which specifically govern the operation of their class of vehicle.

Vehicle Abuse

Vehicle abuse can lead to excessive wear and tear of the vehicle to the point where it is unsafe to operate. An inexperienced, untrained or careless operator can shorten the life of a vehicle drastically by not performing pre-trip inspections, or by riding the clutch, braking excessively.

With the cost of a new school bus being so very high, it is only common sense to drive in such a manner as to prolong the life and condition of the vehicle.

Schedule Delays

Being punctual involves planning. Failing to adhere to a schedule when operating a school bus can cause a variety of problems for yourself and others.

You can not make up for lack of adhering to a schedule by trying to make up time on the road after the fact.

Discourtesy

No perfect trip can contain a discourteous act. Most acts of discourtesy involve at least some degree of risk and can lead to road rage. This, in turn creates a potentially significant hazard.

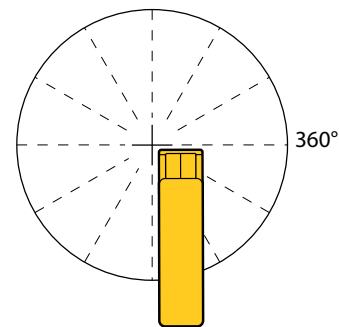
The Perfect Trip

The successful avoidance of all these errors during your daily trip means you have had a perfect trip. It's not such a difficult thing to do as all these errors are interrelated. By carefully and consciously driving to avoid collisions, you automatically avoid making other types of driving errors.

Close to 98 per cent of the time driving is a relatively routine matter, but avoiding collisions during that other two per cent of the time can be extremely difficult. As a professional operator, 100 per cent avoidance of collisions should be your goal on every trip.

ZONE OF AWARENESS

Many drivers are content to limit their awareness to the things they can observe by looking through the windshield, with an occasional glance in their mirrors for good luck. A defensive operator, however, realizes a hazard can develop from any angle and that zone of awareness must include a full 360° circle around the vehicle as well as above and below the vehicle.



While most hazards will appear from either the front, rear or side of the vehicle, many operators have lost control by not being aware of the road condition under their bus. Similarly, drivers have lost the tops of their campers, buses or trailers in parkades or underpasses by not paying attention to hazards above the vehicle. Overhanging eaves, wires or tree limbs may also be a collision point if the driver is unaware.

Remember, the earlier a potential hazard is detected, the more time you have to avoid any problem that develops. Therefore, your zone of awareness should be as wide as possible for the circumstances.

Our zone of awareness contains clues to detect any potential hazards. We can detect these through the use of our senses.

Hearing

The sound of car horns, train whistles, children playing and the sound of other vehicles are all examples of messages we receive through hearing and are indicators of potential hazards.

Listening to the sound of your own vehicle can help you identify maintenance problems that can lead to a collision if left unattended.

To gain the greatest advantage of your hearing as a hazard identifier, you must have unimpaired hearing by not playing the stereo or radio excessively loud and other in-vehicle noises should be kept at a low level.

Feel

As we drive, our bodies are in contact with various parts of the vehicle, our hands on the steering wheel, our bodies in the seat and our feet on the pedals. The vibrations caused as the wheels roll over the road surface are transmitted through the vehicle to our bodies. These vibrations can tell us much about the road surface and how our vehicle is 'holding' the road.

Smell

Can your nose really warn you of a potential driving hazard? The answer is yes! The signals tend to be more subtle and you must learn to interpret with more imagination.

Smell may give the operator early indication of a possible problem with their vehicle such as the smell of hot oil, rubber, or anti-freeze.

Early detection of a vehicle problem allows the operator more time to find a safe location to park and have the problem dealt with.

Vision

Good vision and good visual habits are essential to safe and defensive driving. Vision can change so gradually that it is easy to be unaware of a vision problem until it is too late. Make it a practice to have an eye examination on a regular basis.

There are two interesting facts related to vision that you should be aware of:

- **Speed**

As your speed of travel increases, there is a corresponding reduction in your peripheral vision. At a standstill, most people, while looking straight ahead, can still see objects appearing to the side without shifting their gaze. This gives us a range of vision covering approximately 180°.

At highway speeds, this range of vision is reduced so the effect becomes somewhat like driving through a tunnel where you still see straight ahead but your peripheral vision is limited.

- **Steering**

We tend to steer toward whatever we look at. We use this tendency to help us drive around curves by focusing our gaze well ahead in the direction we wish to go.

If, however, we were to focus our attention on an off-road object ahead, we would find ourselves gradually turning toward that object and if we did not react in time we would drive off the road. For this reason, it is important to keep our eyes moving, scanning the 'Big Picture'.

DEVELOPING GOOD VISUAL HABITS

Continuously scanning our surroundings on and off the road leads to good visual habits. Specifically:

- focus farther ahead as your speed increases
- in an urban area, view the road ahead one full block
- focus farther down the road in rural areas than you would in urban areas
- focus your gaze approximately 12 seconds ahead of your present position
- scan 360° and shift your gaze continuously; this includes checking your dashboard gauges, seeing if any warning lights have come on, and scanning all mirrors
- at night when meeting oncoming vehicles with bright headlights or headlights on high beam, shift your gaze well ahead and to the right edge of the road
- use the glare reducing setting on your rearview mirror
- keep your vehicle windows clean to reduce glare
- maintain an unobstructed view
- vegetation, buildings, trees, parked vehicles or any roadside obstruction that obscures vision should be treated as a hazard potentially requiring you to stop if necessary, giving you the time to study the situation before proceeding
- be aware that other vehicles in the adjacent lane may obscure your vision
- pay attention to traffic ahead possibly stopping or stopped for a left turn or a pedestrian

- remember that urban driving demands a greater need for attention due to the greater concentration of traffic. Traffic controls, congestion and pedestrian traffic on urban roads makes driving more difficult.

It should make you uncomfortable if you are driving in other drivers' blind spots! Virtually all vehicles have blind areas—even motorcycles. (*Motorcyclists are sometimes limited in how far they can turn their head to look behind them.*) Yet, some drivers habitually change lanes without checking their blind areas for other vehicles. It's a good idea to adjust your position relative to other traffic to stay out of another driver's blind spot whenever you can.

Where are your blind spots? That depends on your vehicle. A car typically has blind areas at the sides near the rear of the vehicle, meaning you cannot see anything in these areas by looking in your correctly-adjusted mirrors.

Other vehicles may be blind to anything that is directly behind. Vehicles in which the driver sits very high may have forward-quarter blind spots - they may not be able to see anything low to the ground in front or to the sides near the front of their vehicle.

MIRROR SETTINGS

Exterior mirrors on a school bus are designed to cover blind spots from the operator's seat. The mirrors should be set to fit each individual operator. They are not much good to the operator if not properly adjusted.



Left (Driver's Side) Mirror

It is important to check your mirrors every five to eight seconds while driving. At the same time, it's not enough *just* to check the mirrors; you also have to keep checking your blind spots. If you have been driving for many years you already know the blind areas on most vehicles are large enough to hide other vehicles. Be aware that mirrors may not reveal a vehicle that is changing lanes from two lanes over.



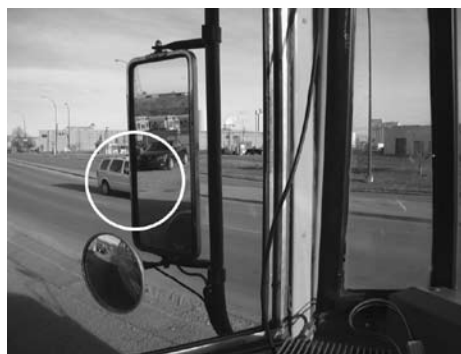
Right Mirror



Front cross over mirror

Example: You are driving in the right lane of a three-lane road, and signal to change lanes to the left into the centre lane. Another vehicle in the far-left lane changes lanes to the right at the same time also wanting to move into the centre lane. In this scenario both of you may be trying to occupy the same space in the centre lane.

It is always possible a lane that was clear of other traffic just a second ago may be occupied. Traffic is often fast-moving and fluid and empty spaces tend to fill up quickly. It is very important to turn your head and check your mirrors before making a lane change.



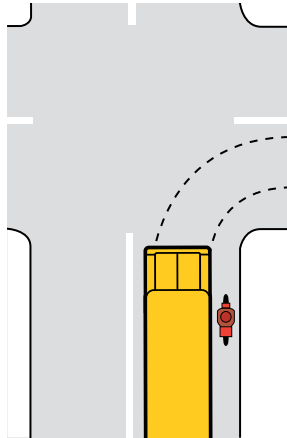
CAUTION: MIRRORS THEMSELVES CAN CREATE BLIND SPOTS

It is important to move your head so that you can look around and behind the mirrors. By doing so, you see objects that might be hidden by the mirrors.

Finally, remember that even parked vehicles have blind areas. Children may be playing around parked vehicles. Before you start up and back out of your driveway, take a quick walk around the vehicle to make sure nothing, living or inanimate, is around, under or behind your wheels.

Motorcycles and Bicycles

Due to the size of these vehicles, they can easily be hidden in your vehicle's blind spots and are even quite difficult to spot in a wide-angle mirror. They are far too often only seen at the last moment. Extra caution needs to be taken around motorcycles or bicycles.



Be alert for this situation

There are large blind spots both behind and to the side of large vehicles. The “right turn squeeze” could occur if a motorcycle or bicycle rider is positioned between a large vehicle that is turning right and the curb. In this position, the driver of the large vehicle may not see the cyclist.

DETECTING AND INTERPRETING CLUES

In our zone of awareness by using our senses, we can detect and interpret clues that may lead to collisions.

Parked Vehicles

Driving beside parked vehicles is potentially hazardous because your vision is partially obstructed. Hazards often appear when there is little time or space for evasive action. Three key sources of hazards are:

1. The space between parked vehicles through which pedestrians and animals may suddenly dart into the street.
2. The parked vehicle may suddenly pull out into your path without warning.
3. Occupants of parked vehicles may open their doors without looking first. Positioning your vehicle at least 1½ metres out from a parked vehicle will place it beyond the arc of a door should it suddenly be opened.

Usually there are clues from parked vehicles of impending entry into the lane of traffic:

- exhaust fumes will indicate the engine is running and that vehicle is potentially ready to go
- back-up and brake lights may indicate that a parked vehicle is preparing to enter traffic
- front wheels pointing toward traffic may indicate the vehicle is ready to leave the space or manoeuvring in preparation to leave
- a person behind the steering wheel may indicate a vehicle ready to leave a parking space.

ROAD HAZARD CLUES

Road hazards are those that pertain to the condition of the road itself and fall into four categories:

1. sight distance limitations
2. manoeuvring limitations
3. traction limitations
4. traffic conflict points

Sight Distance Limitations

These are limitations to your vision caused by curves, valleys, hills, buildings, trees, or large parked vehicles, and the following precautions should be taken:

- watch the road ahead for signs indicating a curve ahead
- when approaching a curve, estimate a safe speed of travel (if not posted on a sign) from the degree of curvature and banking
- when approaching a downgrade, identify if the grade is steep enough to require downshifting (Always downshift prior to the beginning of the hill)
- identify the presence of dips, valleys, buildings, trees or large parked vehicles possibly obscuring other traffic or pedestrians.

Manoeuvring Limitations

Driving a large school bus in certain situations can be more hazardous because more space is required for manoeuvring.

Compensate for these issues whenever you detect:

- narrow or narrowing lanes
- road construction
- gravel or dirt surfaces that have been rutted by the wheels of other vehicles

Traction Limitations

The defensive operator learns through experience to ‘feel the road’ through their vehicle.

Be aware of road surfaces that have:

- surface irregularities on asphalt and concrete such as potholes, frost-heaves and cracked pavement
- wooden surfaces (such as small bridges) containing cracks, holes and protruding nails
- concrete or metal bridge decks in wet or freezing conditions
- washboard conditions
- oil or grease spills
- snow or ice particularly in shaded areas such as underpasses
- ‘black ice’ caused by freezing temperatures.

Traffic Conflict Points

Traffic conflict points are those points on a road that require vehicles to merge, intersect or cross paths.

The conflict occurs because two or more vehicles approaching from different directions are competing for the same space on the road. Examples of such conflict points include intersections, acceleration and deceleration ramps on freeways, parking lots, and merging lanes at bridges and hilltops.

Some specific hazards in freeway driving are:

- on an entrance ramp or merging lane, be alert for vehicles stopped or slowing down unexpectedly
- on a long entrance ramp with an acceleration lane that continues on as an off-ramp or deceleration lane, vehicles may change lanes at the last moment in either direction suddenly and without warning.

(See reference to Weave Zone in ‘Basic Licence Driver’s Handbook’)

- when nearing the end of the off-ramp, look for other vehicles that may be stopped or waiting in line at the end of the off-ramp
- when approaching and passing interchanges on the freeway, note vehicles in the deceleration lane that may suddenly swing back into your lane at the last moment, without warning.

HIGHWAY CROSSING

Two-Lane Highway Crossing

Hazards:

- obstructed visibility of oncoming or turning lanes
- vehicles travelling at high speed.
- vehicles on highway obstructed by school bus mirror

Defensive measures:

- make a full stop
- make sure you have a good, clear view of all lanes before proceeding. Check around your mirrors to ensure they are not blocking the view of another vehicle
- an empty 72-passenger bus takes approximately 10 seconds to cross safely. A fully loaded bus can take much longer.

Four-Lane Highway Crossing

Same hazards exist as the two-lane crossing above, but allow more time for crossing.

Additional defensive measures:

- avoid this type of crossing as much as practical
- ensure bus will fit **completely inside** the median if an additional stop is required.

In any type of crossing:

- always allow adequate time to cross
- perform at least two good checks in each direction – more if necessary.

DETECTING OTHER DRIVING HAZARDS

It is important that you learn to spot a potential hazard and estimate its seriousness, giving yourself enough space and time to take evasive action if the need arises.

Single Vehicle Hazards

As the name implies, these hazards have been classified as 'single vehicle' because they only involve the motion of an individual vehicle. There are many reasons why another driver may present a hazard to you, such as inattentiveness, loss of control or their failure to communicate their intentions to you such as a failure to signal.

The following clues demand that you give the other driver an extra wide berth:

- frequent lane changes suggests aggressiveness, inattentiveness, indecisiveness, fatigue or alcohol impairment
- frequent speed changes when not required by conditions
- failure to signal intentions
- quick, jerky stops when not necessary as opposed to gradual deceleration
- out-of-province licence plates suggest the driver may be unfamiliar with the area and may stop or change directions unexpectedly. This could also be anyone with an Alberta plate who is not familiar with an area, so always use caution if the driver ahead appears lost or unsure.
- Another driver's failure to adjust to dangerous driving conditions such as icy, slippery roads
- special vehicles such as slow moving vehicles, emergency vehicles or vehicles required to make frequent stops.

Multiple Vehicle Hazards

These hazards are typically formed at ‘traffic conflict points’ where traffic converges or intersects and on highways characterized by high volume traffic. Due to the high volume of traffic, hazards are frequently compounded as visibility can be restricted by other traffic present. Always be alert and adjust your speed accordingly.

Left Turns

Left turns at controlled intersections are one of the most dangerous driving manoeuvres and account for a great many serious collisions.

They don’t have to be dangerous - the dangers can be controlled. The most important thing is to be knowledgeable - and then MINDFUL - of what the dangers are.

When you enter an intersection, the immediate danger is the traffic coming from your LEFT on the cross-street. Look left first, to make sure all traffic is stopping before you enter the intersection, then right, then left AGAIN before you move into the intersection.

At a traffic light, a red-light-runner is going to arrive, on average, within four seconds of the light change. You don’t want to be there when this situation occurs.

Pull into the intersection, but leave room for left turning vehicles approaching from the opposite direction to do the same. Some busy intersections have off-set opposing left turn lanes, so that both directions have a good view of the oncoming traffic.

The greatest danger in entering the intersection is the red light runner -- and after the first four seconds that danger diminishes, but never rule out the possibility that someone could still run the red light even after that. Always check left and right no matter how long you’ve had the green light.

If you are the first vehicle waiting in line to turn left, remaining behind the crosswalk may prevent you and others from making their left turns on that light cycle. This is unnecessary and holds up traffic flow.

Once you’re waiting in the intersection to complete your left turn, yield to all oncoming traffic. The law requires the person turning left to yield the right of way to anyone coming straight through. If you do not have a clear view of the oncoming traffic, in all the lanes, then don’t begin your turn. When you see that all traffic has stopped, then you can go.

Sometimes oncoming traffic is still blocking your left turn even after the traffic light has changed to yellow or even red. Provided that you entered the intersection legally on the green, you are permitted to complete your turn at the earliest opportunity when it is safe to proceed, **but use caution**.

When waiting to turn left, don’t turn your wheels to the left until it is clear to go. If you are rear-ended while you are waiting, your already-turned wheels will steer your vehicle into the path of oncoming traffic -- so keep them straight until the way is clear to complete your turn. Then, complete the turn into the correct lane.

One last hint. If a number of vehicles are waiting to turn left ahead of you and it looks like it will take more than one light cycle to be able to make a left turn, consider continuing through the intersection and make three right turns instead. If you do this on side streets (not private property) it's legal and often quicker when only one or two vehicles are able to complete their left turn on each light cycle.

Other Road User Hazards

Potential driving hazards are increased by the presence of other road users, including pedestrians, cyclists, joggers and animals. In most cases, these other road users won't be out in the main flow of traffic, but their proximity to the road seldom guarantees this. Clues to hazardous situations include:

- Location of the road user relative to the road
 - pedestrians or joggers on the shoulder or sidewalk
 - cyclists travelling on the road edge, shoulder or sidewalk
- Motion of the road user
 - pedestrians running toward the road
 - children playing near the road
 - cyclist approaching from a side road
- Attentiveness of road user
 - pedestrian's vision may be obscured by umbrellas, trees, parked vehicles, *etc.*
 - driver stepping out from a parked vehicle without first checking for traffic
 - child chasing a ball
 - pedestrians talking to each other or listening to music on MP3 player.
- Lack of control
 - a motorcyclist turning on a slippery surface
 - child on a bicycle.

It is important to realize the various types of hazards discussed above have been categorized for the purpose of presentation only. In an actual driving situation, they frequently occur in combination, requiring split-second thinking and action on your part.

COLLISION AVOIDANCE

Commentary Driving

One of the best methods of hazard detection you can practice is 'commentary driving'. Commentary driving is a technique where the driver actually verbalizes (talks about) their main observations and interpretations of the events developing around and ahead of their vehicle. With regular practice, 'real observation' will become habit and you will not find it necessary to speak out loud. Silent but 'active' observation is just as effective for collision avoidance.

An example of commentary driving:

"Signal light is stale green; oncoming car signaling left; walk light just flashed off; pedestrian crossing."

Commentary driving is extremely useful when practiced because:

- it creates an awareness of the vast number of things a driver should be watching for and thinking about
- it assists in the development of good visual skills and helps the driver resist common distractions
- if done aloud with an instructor, it helps the instructor evaluate progress and instructor effectiveness. It also shows the instructor where the operator's attention is focused and how far ahead the operator is looking.

You can use commentary driving with the *Steps For Avoiding Hazards*, as mentioned earlier:

Identify the hazard, **predict** what may happen, **decide** on a course of action and **execute** your action plan.

Let's follow one example all the way through the process of commentary driving:

Identify:

"Speed is 50 km/h, cars are parked on both sides of the street, no other vehicle traffic is in sight front or rear, there are no side streets, children are playing ball one half block ahead on the right and road conditions are good."

Predict:

"Child could run out onto road from behind parked cars."

Decide:

"If the child runs out from the right, sound horn, apply brake. Worst case scenario, hit the parked car rather than the child."

Execute:

"Reducing speed now, preparing to brake if necessary."

This example is fairly simple. Imagine how this situation would have been complicated if there were oncoming traffic and a car behind you was tailgating and attempting to pass. Practicing this approach will better prepare you when a real emergency arises.

Two-Vehicle Collisions:

To this point, we have discussed how to detect hazards and given you a few suggestions on how to minimize them.

We will now discuss how to avoid the two-vehicle collision as it is usually the most serious of all collisions.

Positioning of the Vehicles Before the Collision Occurs:

There are only six positions that another vehicle can take in relation to yours prior to a collision.

The six positions are:

1. vehicle ahead
2. vehicle behind
3. oncoming vehicle
4. vehicle approaching intersection or at an angle
5. another vehicle passing you
6. you passing another vehicle.

By studying these six positions, learning the hazards associated with each and the defenses against them, you can avoid being in most two-vehicle collisions.

This section will study those types of collisions as well as the mystery crash, and run-off-the-road collisions.

1. Collisions With The Vehicle Ahead

Why do collisions with the vehicle ahead occur?

There could be a variety of reasons, however, they generally all boil down to *'following too close'*.

When required to stop you must always be able to stop before running into the vehicle ahead. When driving a larger vehicle, such as a school bus, it will take longer to bring your vehicle to a full stop than it will be for the motorist in front of you.

Being a good 'follower' is one of those key attributes that separates a professional operator from the average driver.

In order to defend against this type of collision you must:

- stay alert, and
- allow a safe following distance.

For cars and smaller vehicles, the two second rule can apply. However, larger vehicles, such as school buses should not be closer than four seconds to the vehicle ahead.

The four second rule works as follows:

- watch the vehicle ahead of you pass a stationary object (such as a power pole)
- count to yourself:
 - *one-thousand-and-one*
 - *one-thousand-and-two*
 - *one-thousand-and-three*
 - *one-thousand-and-four*
- if you pass the same object before you finish counting, you are following **too close**. Slow down a bit and increase your following distance.
- Repeat the count process until you are at least four seconds behind the vehicle ahead.

There are times when your following distance should be increased to more than four seconds, such as when you are following:

- oversize vehicles that obscure your vision
- dangerous goods carriers
- vehicles that stop frequently, such as delivery vans, other school buses, *etc.*
- two-wheeled vehicles such as motorcycles or bicycles
- vehicles being driven erratically
- emergency vehicles

Also increase following distance to more than four seconds in poor road conditions and under conditions that reduce visibility such as fog, snow and smoke. Also leave more space in areas where traffic intersects, merges, or diverges.

Few drivers are fully aware of the total stopping distance or time it takes to bring a vehicle to a full stop. Consequently, they make errors in their decisions which, in turn, may result in a collision with the vehicle ahead. Many drivers following too close can result in a “domino” effect crash involving a large number of vehicles.

Don't be a Domino

2. Collision With The Vehicle Behind

Tailgaters can create hazardous situations for you. Be aware of any vehicle following you too close and allow or encourage them to pass if possible. If you are already driving at the maximum posted speed limit, slow down a little to see if the tailgater will pass. If the tailgater stays behind you, increase your following distance from the vehicle ahead to give yourself more time to react should you have to stop suddenly.

3. Collision With An Oncoming Vehicle

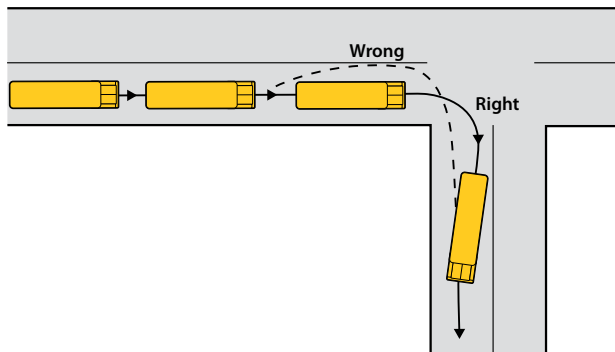
One of the first rules of the road we learn is that you are expected to drive on the right side of the road. There are times, such as passing another vehicle, when it is permissible to venture to the left side. But these are specific instances only. If everyone carefully followed this rule of staying to the right, there would not be any head-on collisions.

Circumstances do arise in which you or an oncoming vehicle will cross the centre line and you may suddenly find yourself in the path of disaster. Some of these circumstances are driver caused, but some are not.

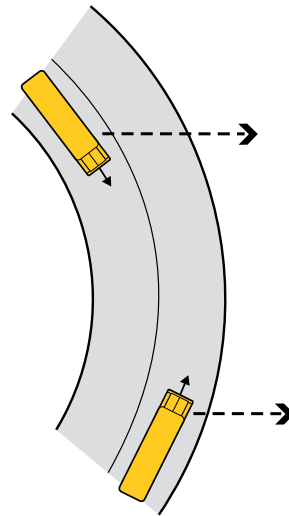
Being consciously aware of the reasons why a driver would venture into the wrong lane makes it more likely that you will be able to anticipate and avoid a potential head-on collision.

Other than when passing another vehicle, there are four reasons a driver could be on the wrong side of the road:

- A. **A problem in their lane.** Trouble in a driver's own lane such as a construction barrier, animal, pedestrian or bicycle may cause a driver to swing left in order to avoid the problem.
- B. **Faulty driving manoeuvres.** Through an error in judgment a driver may enter your lane. For example: making a wide right turn (which may be necessary for larger vehicles), or misjudging the distance required to pass a vehicle. If you drive a vehicle with an extended wheel base, take any additional space needed to complete the turn on the street being entered.



- C. **Centrifugal force on curves.** Centrifugal force acts on your vehicle by trying to keep it going in a straight line when negotiating a curve. The outward arrows in the following diagram illustrate the centrifugal force acting on the two vehicles.



If the driver on the inside of the curve allows centrifugal force to push their vehicle across the centre line, a sideswipe or head-on collision could result.

What is the best way to negotiate a curve?

Slow down before entering the curve. On right curves, keep the front of the vehicle close to the right side of the lane and closely watch the right mirror for the position of the rear of your vehicle. On left curves, keep the front of the vehicle to the right side of the lane, watching the left mirror.

Slow a bit before the curve and then gently apply power to the wheels after entering the curve. When you apply power to the wheels, you introduce a force in a different direction from the centrifugal force. The result is greater control.

D. Loss of Control. Operators can lose control of their vehicles for many reasons, including:

- right wheel dropping off pavement edge and the operator overcompensates in making the recovery
- loss of visibility, centre line obscured or worn away
- falling asleep at the wheel, drug or alcohol impairment
- tire blowout, skidding on a slippery surface
- poor road conditions, potholes
- poor judgment

In these instances what can you do to avoid a head-on collision? The next points have been developed for this purpose.

Read The Road Ahead

Be aware of oncoming traffic and try to anticipate what problems the oncoming driver may encounter causing that vehicle to cross the centre line and enter your lane.

Ride To The Right

Don't crowd the centre line. Leave plenty of room. If there are two lanes available to you going in the same direction, use the right lane as a matter of preference. In urban areas, the right lane generally moves quicker because vehicles turning right normally cause less delay than those turning left.

Reduce Speed

When you see a threat developing with an oncoming vehicle in your lane, reduce your speed immediately. This means slow down right away and if necessary, sound your horn and flash your lights to let the oncoming vehicle know you are there. By quickly slowing down you allow them the extra time they may need to get back into the proper lane and avoid a collision.

Continue slowing down and prepare to stop if necessary until the situation clears.

Ride Right Off The Road

If you have followed the first three steps and the vehicle still keeps moving in your direction, you have only one out left – to ride off the road to the right. This option will, in almost all cases, be better than a head-on collision.

If a collision is unavoidable, try to hit the object or vehicle at an angle rather than head-on to lessen the impact. Never try to out-guess the other driver by pulling to the left.

4. Intersection Or Angle Collision

About one-half of all two-vehicle collisions occur at intersections. This is largely due to the traffic conflict that exists at intersections, both vehicular and pedestrian. Be prepared for the unexpected.

Intersection hazards include:

- stale green lights that have been visible for a block or two may change suddenly to yellow. Also watch for pedestrian signals that have changed to 'wait' as an indication of a green light about to change to yellow.
- vehicles in the left lane waiting behind vehicles that are waiting to turn left may become impatient and without warning or signal, swing over into the right lane to get by
- vehicles that are sitting at a green light rather than continuing on may be waiting for other vehicles or pedestrians to clear
- drivers making turns may signal and move into the intersection and then stop unexpectedly even when no traffic or pedestrians are blocking their path.

Negotiating Intersections

Know

Expect the unexpected. Decide in advance what you need to know at intersections. Your indecision can confuse other drivers and cause a collision. Be prepared to yield at all times.

Show

Signal your intentions well in advance and be in the proper lane.

Slow

Slow down gradually. An intersection is not a place for speed. Remember at 25 km/h you cover over seven metres per second and may travel five metres just moving your foot from the accelerator to the brake.

Go

Proceed through the intersection without hesitation, when safe.

It is important to keep in mind that other uncontrolled traffic access locations are considered intersections as well, such as side roads that enter onto highways, driveways and alleyways. The distraction from pedestrians, cyclists and animals are additional hazards.

At all intersections:

- never assume the other driver will yield to you where required. Approach each intersection with your foot off the gas and covering the brake
- as you approach the intersection, look left, then right. Prior to going through the intersection check again left then right. If objects like parts of your vehicle or your mirrors block your vision, check carefully around them before you proceed
- proceed only when safe to do so, even if you have the right of way. You can't count on the other driver always obeying the rules
- It is never a good idea to change lanes in an intersection
- never pass a vehicle that is stopped at an intersection until you are sure it is not stopped waiting for a pedestrian to cross. Never assume a vehicle stopped at the intersection and signaling left is only waiting for oncoming traffic to clear. There may be a pedestrian crossing as well. *It is illegal to pass a vehicle that has stopped to allow a pedestrian within a crosswalk (marked or unmarked) to cross the road.*

Crossing Intersections:

In an urban area the following procedure will help you travel safely through each intersection and will get you into the habit of looking fully around your vehicle.

- depending on visibility, take your foot off the accelerator and cover the brake if needed. Check mirrors and be aware of traffic following you. Prior to entering the intersection, check left then right for traffic indicators and controls, pedestrians and other vehicles. Make certain no vehicle approaching is about to turn left in front of you. If clear, check to the left and right once more and proceed through the intersection when safe
- once past the intersection check mirrors again for any change in traffic patterns behind you. If you plan to turn at the next intersection, position yourself so you are ready to turn. Look for pedestrians that may be crossing ahead
- between intersections, watch for traffic changing lanes or entering your lane from alleys or driveways
- when approaching the next intersection repeat the procedure.

With any intersection, if your visibility is obstructed for any reason, you may be required to stop prior to proceeding.

5. Collision Caused By Another Vehicle Passing You:

As a school bus operator, you quickly become aware that most motorists would rather drive in front of you than behind you and some of these drivers will take unnecessary risks such as:

- tailgating – staying too close behind your vehicle and darting out to make a pass with limited visibility
- following the leader – a series of vehicles passing you at the same time, even though the second and subsequent vehicles have extremely limited visibility.

There is the potential here for three types of collisions:

- the sideswipe
- the cut-off
- being run off the road.

As a defensive driver, you can do much to alleviate the potential hazards and make it easier for other vehicles to pass.

If the pass appears to be safe, without creating a hazard:

- maintain your lane position, either in the centre of the lane or slightly to the right to allow the passing vehicle extra clearance
- maintain or reduce your speed, avoid a tendency to accelerate.

If the passing vehicle cuts in too quickly after the pass, slow down to ensure a safe following distance. Depending upon the situation, braking may even be necessary.

If the passing vehicle attempts to abort the pass and attempts to get back in line behind you, you may need to accelerate quickly to allow them to pull back into the lane safely.

Section 23 (b) of the Use of **Highway and Rules of the Road Regulation** under the **Traffic Safety Act** states the following:

23. Notwithstanding anything in this Regulation, a person driving a vehicle shall not drive the vehicle so as to overtake and pass or attempt to pass another vehicle (b) by driving in a parking lane

Note: *In the above definition “parking lane” means the shoulder of a provincial highway to the right of the solid white line.*

6. Collision Caused By You Passing Another Vehicle:

Think about passing before you do it. Every time you find yourself in a position to pass you must ask yourself:

- What will I gain by passing?
- Is it worth the risk?
- Is the pass necessary?
- Will I have to exceed the speed limit to pass?

By consciously asking yourself these questions before you pass, you may find, in most cases, you don't have to pass after all.

Passing also tends to increase fuel consumption significantly. There is nothing wrong with passing another vehicle, so long as it is done **where and when it is safe** to do so and can be completed **without exceeding the speed limit**.

The Canada Safety Council advocates a method known as the '11 Points to Perfect Passing'.

1. Is this pass necessary?

You may not need to pass at all and rather than take a chance, and break the tempo of traffic, it might be better to continue along as you are.

Before attempting any pass always ask, "Is this pass necessary?" If the answer is no, then don't pass.

2. Do not pass if the vehicle ahead is:

- signaling or otherwise indicating a left turn
- changing lanes
- decelerating suddenly
- passing children, cyclists or animals
- being passed by another vehicle. Wait until the lead vehicle has finished passing, your visibility is restored and an adequate gap is present
- being driven by a driver who appears inattentive.

3. Stay back and maintain a safe following distance

The closer you get to the vehicle ahead, the less you can see. Tailgating, in order to pass, cuts down on visibility and the lead vehicle may suddenly slow down or stop leaving you in danger of being involved in a collision with the 'vehicle ahead'.

4. Check ahead

If there is an oncoming vehicle, you need to decide if you have the time and passing distance you need to get into the left lane, pass the vehicle ahead and get back into the right lane well before this vehicle reaches you. Remember that your school bus does not accelerate quickly and takes considerably more time and distance to pass safely than when driving a car.

5. Check traffic behind

Use a mirror check and shoulder check to determine whether or not someone is attempting to pass you before you attempt to pass the vehicle ahead.

6. Accelerate

Build up to an adequate speed to ensure that a safe pass is possible. You can still change your mind at this point.

7. Signal left

Use your signal lights to warn traffic behind of your intent to pass. An attentive driver in front of you will also see your signal and be alerted to your intent to pass. Check your left mirror and shoulder check to the left.

8. Move Left

Now you are really committed. You are on the left side of the centre line and it is your responsibility to make a safe pass. Ensure you have centered your vehicle in the passing lane and that you have provided sufficient clearance for the vehicle being passed. Remember that it is illegal to exceed the speed limit when passing.

9. Check Traffic Behind

Signal your intention to move back into the appropriate lane, shoulder check and mirror check. Make sure you don't cut-in too close in front of the vehicle you just passed. This is especially important since your school bus is a long vehicle and it may be difficult to judge when you have sufficient room to safely return to your lane.

10. Move Right

Move smoothly back into your normal driving lane to the right of the centre line.

11. Cancel Your Signal

Check to make sure that you are travelling at a proper and safe speed.

Other Passing Situations:

At times you may also be required to pass in other circumstances.

Passing parked vehicles:

- be prepared for the unexpected, such as a vehicle's door suddenly opening, a child darting out from between the parked vehicles or the vehicle pulling out without warning. Always leave enough space between your vehicle and parked vehicles (1.5 metres).

Passing pedestrians and cyclists:

- yield to pedestrians at all times
- provide maximum clearance when using the same road as cyclists
- when passing cyclists, use your horn only when necessary.

Passing animals:

- slow down when entering animal crossing zones or when noticing animals on or along the road. Pass animals at reduced speed and stay alert. A startled animal may suddenly dart across the highway without warning
- prepare to stop or take evasive action if the animal approaches the road.

Note: *If swerving your vehicle to avoid hitting an animal could jeopardize the safety of yourself, your passengers or other motorists, **do not swerve.***

THE MYSTERY CRASH

The 'mystery crash' is a collision that is difficult for police authorities to determine a cause. It is the type of collision in which the driver, for some reason, loses control and runs off the road into an embankment, tree, abutment or other fixed object. This type of collision has a high mortality rate.

Although stemming from a variety of causes and contributing factors, generally the cause of the mystery crash is a loss of driver control. By control, we usually mean the driver's ability to steer and to stop their vehicle. Loss of control is often due to driving too fast for prevailing conditions.

Driving too fast for prevailing conditions sounds like a nice catch-all, but what it really means is too fast, with respect to one or more of the following six conditions.

Light Conditions

- over-driving your headlights at night. The average headlights are only capable of illuminating the highway for approximately 100 metres
- headlight glare at night. The human eye takes about seven seconds to recover from the headlight glare
- sun glare in the morning, late afternoon or on a sunny winter day
- a windshield that is difficult to see through from dirt, bugs, snow, ice or condensation.

Weather Conditions

- driving rain, snow, sleet and fog may contribute to loss of vehicle control.
- reduce your speed, drive with your headlights on and, if conditions get bad enough, don't drive at all.

Road Conditions

Curves, crowns, dips and inclines all limit the speed at which you can drive your vehicle safely.

Traffic Conditions

An operator can be driving too fast for conditions when not:

- looking far enough ahead
- anticipating traffic situations
- using good judgment
- avoiding getting into tight spots in the first place

Vehicle Conditions

- bad tires blowing out at high speeds
- bald tires unable to grip the road
- defective brakes

Driver Conditions

- driving requires both mental and physical sharpness. Be alert for anything that could distract you or for the onset of fatigue that could cause you to fall asleep behind the wheel.
- driving demands that you keep your eyes moving – scanning the road ahead, to the left and the right of the road. Every few seconds, check your review mirrors to be aware of any vehicles that may be following or trying to pass
- driving under the influence of medication, illegal drugs or alcohol may affect your ability to drive safely.

Keep in mind these points about the ‘mystery crash’:

- it can happen to anyone – even the professional operator
- it is a very severe collision, fatalities are frequent and injuries are serious

- it is the most preventable type of crash because it involves only you maintaining control of your vehicle and yourself
- speed too fast for conditions is most often the cause of the mystery crash. Keep your speed down, start slowing down sooner and always adjust your speed to conditions of light, weather, road, traffic, vehicle and driver
- be sure of your own physical and mental fitness to drive. You cannot control your vehicle if you are not in control of yourself.

There are no magic formulas to avoid these types of collisions, but the point of defensive driving is to do everything you possibly can to prevent being involved in any type of collision.

Be alert and aware of potential hazards. Be sure of your own physical and mental state along with practicing the *basic collision prevention formula*. These precautions will diminish, if not prevent, the chance of you being involved in a collision.

EMERGENCY DRIVING TECHNIQUES

Skid Control

The best way control a skid is to avoid it in the first place!

True professionals drive so seamlessly that you do not feel anything when they shift, turn or brake. The key is to plan ahead, watch carefully and slow down, especially if you are unfamiliar with the road. Skids almost always happen because the vehicle was travelling too fast for conditions.

Be careful when conditions might be slippery, since this is when most skids occur. But no matter what the road's surface condition is, skids are caused by driver error.

Try to turn too sharply, enter a turn too quickly or use excessive acceleration or braking and you'll get the chance to practice skids whether you want to or not!

A number of factors could cause a vehicle to go into a skid. During a skid, the tires lose proper traction with the road surface. The normal means of controlling the vehicle are affected – steering, braking, decelerating and accelerating. You must be able to quickly detect a loss of traction in time to maintain or regain control. Loss of traction may include:

- skids caused by tire failure, resulting from under inflation or sudden deflation from a blowout
- front wheel skids resulting from faulty brakes, excessive acceleration or speed on curves, rough or slippery surfaces
- hydroplaning resulting from travelling too fast on a water covered road
- skids caused by the oily film that develops on the road after the first few minutes of rain

Once you lose traction and your vehicle goes into a skid, the correct way to regain control is through steering and braking properly.

Steering

Turn your wheels in the same direction the rear of the vehicle is skidding. Be careful not to over-steer. You will be able to feel when the vehicle regains traction. Then, straighten the wheels.

Frequently a skid in one direction is followed by one in the opposite direction (often caused by over-steering while trying to correct the first skid). As the vehicle fishtails in the opposite direction, steer in the direction of the new skid.

Braking

ABS (anti-lock) brakes have been around awhile, but there are still drivers who have not learned what they are, how they work and how to use them effectively. Most of us don't get the chance to properly practice the skills required to deal with skids or loss of control situations.

Don't "pump" ABS brakes

Emergency braking with non-ABS brakes

requires a sensitive touch on the brake pedal, using a technique called "threshold braking." Threshold braking is what some people confuse with the practice of "pumping the brakes." But that's not really what it is. Awkwardly pumping the brakes with no "feel" for what the wheels and brakes are doing is counterproductive in a situation where maximum braking effort is needed.

Threshold braking means applying brake pressure right up to the point of almost locking the wheels (skidding), backing off just enough to prevent the skid, then constantly adjusting throughout the stop to keep the braking effort right at that point. This is not easy. You have to acquire a "feel" for it, literally. What works one millisecond won't work the next, and you have to be quick enough on the pedal to stay on the edge of just avoiding a skid, without actually locking your wheels. Once mastered, the technique will stop you faster than any other way.

Threshold braking is what ABS brake systems do for you. Computer-controlled sensors at each wheel "feel" when that tire is about to slip, and lessen the brake pressure at that wheel to keep the skid from occurring -- hundreds of times a second.

With ABS brakes, you don't lose control and go into a skid, and therefore you don't lose your ability to steer. This is the important part. In a panic stop with ABS brakes, you can steer around whatever it is you are trying to miss -- whether it's traffic cones or something else, like a car -- or a child.

Remember this: if you try to pump ABS brakes, they will not work. Pumping ABS brakes defeats the computer's efforts to sense a wheel skid. If your vehicle has ABS brakes, when you need to stop in a hurry, press the brake hard and hold your foot on the pedal no matter what it feels or sounds like. ABS brakes pulsate, they rattle, and they make noise – but that's normal – they're doing what they are supposed to do.

Do not release pressure on the brake pedal on a vehicle with ABS brakes until you no longer need to brake.

As a suggestion go to an empty parking lot somewhere, and stop hard enough to activate your ABS system. You'll then know what it feels like before you really have to use it. Doing so might save your life or the life of someone else.

Tire Blowout

Equally as frightening as going into an uncontrolled skid is a tire blowout.

If one of your front tires blows, there will be a strong pull in your steering towards the side with the blowout.

A back tire blowout may or may not cause the back end to swerve or 'fish-tail'.

A flat tire acts as a brake and the bus will pull hard to that side. You will have to grip the wheel firmly to maintain steering control.

When a blowout occurs:

- grip the steering wheel firmly and steer your vehicle straight down the centre of your lane
- **DO NOT** apply the brakes immediately
- remove your foot from the accelerator, if the vehicle starts to skid, follow skid procedures
- if a quick stop is required to avoid a collision, initiate threshold braking
- activate the right turn signal, move right slowly, to the shoulder or edge of the road and stop. Watch for soft shoulders that could make control of your vehicle more difficult
- activate hazard warning lights.

Loss of Brakes

You are driving down the highway, you step on the brake pedal to slow down or stop – and there is no response. This is definitely an emergency situation.

With a loss of brakes, the operator should:

- pump the brake pedal. If there is any resistance at all, you may be able to work up enough pressure in the brake system to activate the brakes
- downshift to the lowest gear possible. If the way ahead is clear, allow the engine compression to slow you down and stay on the road. Try to slow the vehicle down more by gradually applying the park brake but be careful not to lock the rear wheels
- as you slow down, select a path for leaving the travel portion of the road and bring the vehicle to a stop on the shoulder or as far to right as practical
- If you must leave the road quickly to avoid a collision, select the path that will most likely minimize injury and property damage, in that order. Look for something to sideswipe, like a roadside bank, snow bank, guardrail, even parked cars – anything that will slow you down. If you must go into a ditch, do so at an angle to reduce the chance of a rollover.

Loss of Visibility

Several things can happen to cause a sudden loss of visibility – your headlights could fail, your hood flies up, mud and slush gets splashed on the windshield, *etc.* Suddenly you can't see where you are going and you must attempt to stop as quickly as practical before losing steering control or hitting something.

What can you do in each situation?

If your headlights fail:

- immediately hit the dimmer switch to see if the high-beams work
- activate your right-turn signal
- slow your vehicle quickly but safely. The idea is to reduce your speed before a slight steering error results in a collision
- carefully steer out of the traffic lane and stop at the side of the road in as safe a location as practical
- activate your hazard warning lights and place warning devices on the road as required by law

If your hood flies up:

- look out the left and right windows to keep your sense of direction and road position
- apply brakes moderately
- activate your right-turn signal
- steer out of the traffic lane and stop in as safe a location as practical
- activate your hazard warning lights and place warning devices on the road as required by law

If mud or slush is splashed on the windshield:

- turn on wipers and washers
- look out side windows and apply brakes moderately
- if the windshield wipers have failed or you have no washer fluid, activate right turn signal

- pull over as far as practical out of traffic and stop
- activate hazard warning lights. If vehicle will remain stationary more than momentarily, put out warning devices on the road as required by law.

Emergency Evasive Action

When you suddenly see an obstruction or potential hazard such as a pedestrian, ball, another vehicle, construction barrier, *etc.*, in your immediate path, you must take evasive action to avoid a collision.

Evasive action to avoid a collision is simply the exercise of your fundamental driving manoeuvres under conditions of stress, limited time, space and distance. You must decide which of these evasive actions is appropriate:

- controlled emergency braking
- quick steering, with or without braking
- leaving the paved portion of the road both with or without roadside hazards present

For effective evasive action, you must resist the urge to always just immediately slam on the brakes. Generally drivers tend to apply the brakes at the first sign of trouble. While effective in many instances, if your vehicle is not equipped with anti-lock brakes, hard, sudden braking could lock the wheels and cause loss of control, thereby reducing your chance to avoid a collision.

Deciding that braking is your best option will depend on how fast you are going, how far away the object is, how good your tires are and whether the road is wet or dry.

Since this is an emergency situation, you will not have the time to think about your choices for very long. If it's not immediately obvious that you can stop in time, you must choose to steer your vehicle in an alternate path.

At a glance you must assess your escape path for the following:

- is the escape path free of hazardous obstacles?
- are clearances sufficient for a vehicle the size of my school bus?
- will an off-road surface still permit steering control?
- is the path going to remain clear or will it be occupied by someone or something else by the time you get there?

Remember, if you focus only on the obstruction, you will be unable to assess your best escape path. Look to where you want to go, taking in the 'big picture'. The size and weight of a larger vehicle limits its ability to swerve sharply to avoid an object or to leave the pavement with any great amount of control. Overturning is always a danger, especially when your wheels leave the pavement and are in soft ground.

Steer firmly and as gradually as possible to clear the obstruction. Use controlled braking. Where a collision is unavoidable try to:

- avoid a head-on collision. Colliding at an angle reduces the force of the impact
- avoid hitting pedestrians. If you have a choice, it's far better to hit inanimate objects than people.

ENERGY SAVING DRIVING TIPS

Safe, smooth driving could save you or your company as much as 15 per cent to 20 per cent of the annual fuel costs of operating a school bus.

Attitude

The right attitude is essential for safe and economical driving. When emotions are running high, your judgment can fail you and you may not notice otherwise apparent, even obvious dangers. If you find yourself driving while emotionally stressed or upset, it is important

that you pull over, take a few deep breathes and calm down, before something happens that you might regret.

Don't let the error that another driver commits be the reason that you lose control and possibly be involved in a serious collision. All too many collisions occur when a driver is mad, upset, stressed, or distracted in some way. **Try to keep your attitude rational, calm and positive.** This is all part of being a 'professional operator'.

A professional operator is always concerned about the safety of their vehicle, passengers and the financial well-being of the bus owner and school jurisdiction.

ROAD RAGE

As motorists, we have almost all found ourselves in unpleasant situations involving abusive gestures or language from another driver who takes issue with how we drive. Anxiety and frustration can quickly provoke an aggressive or careless driver, who tailgates, speeds, fails to yield the right of way among other behaviours.

Aggressive driving behaviour may lead to incidents of road rage where motorists have been threatened and/or subject to retaliatory actions by angry motorists.

If people drive responsibly they will reduce the chances of conflict on the road and help make our roads safer.

Experts recommend the following tips to help avoid road rage conflicts:

1. Plan your route in advance. Some of the most erratic and inconsiderate driving occurs when motorists are lost.
2. Make a conscious decision not to take your problems with you when driving.
3. Combat the warning signs of stress by getting fresh air and breathing deeply and slowly.

4. Avoid heavy meals which tend to make a person drowsy.
5. Drive in a courteous and considerate manner. Give way at busy intersections and where traffic lanes merge.
6. Don't compete or retaliate. If someone's driving annoys you, don't try to 'educate them'. Leave traffic enforcement to the police.
7. Don't take other driver's mistakes personally.
8. Avoid honking your horn unless absolutely necessary and, if you must, tap it lightly.
9. Say, "Sorry" if you make a mistake. An apology can reduce the risk of conflict.
10. If you are being physically threatened, stay in the bus and secure the doors. If you have a cell phone, call the police or use the company's two-way radio to have the police come. Use your horn and lights to attract attention.
11. If you think you are being followed, drive to a police station, bus yard or school.

(Borrowed from Transport Canada, 2001)

Safe, Smooth Driving

You use energy to accelerate and gain momentum; you waste energy when you brake to slow down or stop. Looking ahead 12 seconds down the road at the traffic situation and maintaining a four second following distance between vehicles gives you the necessary space to slow down, accelerate or change lanes safely and smoothly.

The objective is to try to minimize speed changes by being in harmony with the traffic tempo and, in urban areas, in sync with traffic lights.

Reduce Speed

As speed increases, so does the potential for collisions and fuel consumption goes up.

Tire Pressure

Keeping tires inflated to their recommended pressure will result in safer, longer tire life as well as greater safety while driving.

Shifting Gears

Get into high gear quickly. An automatic will shift earlier if you reduce pressure on the gas pedal as you gain speed.

With manual transmissions, shift at an engine speed just high enough to permit progressive upward shifting (near the RPM for peak torque). Don't rev the engine to peak RPM between shifts.

Avoid Excessive Idling

Ten seconds of idling uses more fuel than restarting your engine.

Two ways to manage idle time

1. **The driver** knows how long the engine should run before and after a trip for correct engine operation and prevention of unnecessary fuel use
2. **The vehicle's computer** - Some modern engine monitoring systems automatically shut-down the engine after a preset idling time

Excess idling increases:

- fuel costs
- engine wear
- fuel emissions

Company policies on idling are becoming more common and should be followed.

An example of idling costs

- A school bus idles for **one hour** per day for 200 days
- In one hour, a bus consumes **four litres** of fuel that costs 80¢ per litre *(Based on this example - your price per litre may differ considerably.)*

What is the annual cost of idling for a fleet of 50 buses?

- a. \$ 4,000 ?
- b. \$10,000 ?
- c. \$12,000 ?
- d. \$26,000 ?

Calculating the cost of excessive idling:

One bus burns four litres fuel an hour
 one hour per day for 200 days =
 800 litres wasted fuel
 800 x 80¢ = **\$640**

Fleet of 50 buses @ \$640 x 50 =
\$32,000 per year

Idling - Engine oil life can be reduced by as much as 75 per cent leading to more frequent and expensive oil changes.

Idling - Engine wear: One hour of idling = equivalent of 11 kilometres of driving.

- Never idle your engine for more than a minute (*or as recommended by vehicle manufacturer or company policy*)
- Warm-up the engine as you drive away slowly

How much of a bus’s potential energy is actually used to move the bus?

- a. 70% ?
- b. 60% ?
- c. 50% ?
- d. 40% ?

* Less than 25% potential energy is used to move the bus!

- 66% fuel used is lost in engine processes
- 7% lost to auxiliary devices
- 2.8% lost to driveline
- 15% used to overcome aerodynamic drag
- 9% used to overcome rolling resistance.

Auxiliary Equipment

To save fuel, turn off energy consuming equipment when not required (such as auxiliary rear heaters, electric defrost and fan motors)

Pumping the Gas Pedal and Revving the Engine

Rapid depression of the gas pedal pumps a jet of gas into the carburetor. This pumping action may be required for cold weather starts or after a vehicle has been standing idle for days. However, unnecessary pumping of the gas pedal or revving the engine wastes fuel and can cause engine damage.

Cell Phones

Cell phones have no place in a school bus operator’s ear while operating the school bus.

A professional driver knows that driving requires all of our attention and focus. Much research and media attention has also come to the conclusion that cell phones and driving safely do not go hand in hand.

If you are required to use a cell phone while operating the bus, find a safe, off-road location to park - then make your call.



Yield Sign

Reference to question about color of Yield Sign earlier in this Session

Section 3.2 Defensive Driving

REVIEW WORKSHEET

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. There are six conditions in any driving situation and your ability to adjust to any of them may prevent or create a collision. The six conditions are:
 2. A defensive operator realizes a hazard can develop from any angle and that zone of awareness must include a full _____ circle around the vehicle as well as above and below the vehicle.
 3. Mirror settings cover all blind spots. True? or False?
 4. One of the best measures of hazard detection is commentary driving. What is commentary driving?
 5. Name the six positions of vehicles before a collision occurs. | <ol style="list-style-type: none"> 6. What three factors determine stopping distance?
 7. Safe, smooth driving could save your company as much as _____ per cent of the annual fuel costs of operating a school bus.
 8. Experts recommend 11 tips to avoid road rage conflicts. Name four of them.
 9. Why are cell phones not to be used when operating a school bus? |
|---|--|

SERIES 3 – GLOSSARY OF TERMS

Term	Definition
Braking Distance	– how far the vehicle travels during perception, reaction time and actual vehicle stopping distance
Braking Time	– how long it takes to stop from the time the brake is pressed until the vehicle actually stops
Controlled Railway Crossing	– those that have mechanical flashing lights or other safety devices
Defensive Driving (DDC)	– driving to prevent collisions in spite of the incorrect actions of others and adverse conditions
Hand-over-hand method	– method of steering where one hand pushes the steering wheel up, across and down, while the other hand reaches up to the top of the wheel and pulls down
Highway	– any publicly or privately owned thoroughfare, street, road, etc. that the public is ordinarily entitled or permitted to use for the passage or parking of vehicles including adjacent sidewalks, ditches
National Safety Code (NSC)	– agreement between federal and provincial governments to have minimum performance standards
Noise Suppression Switch	– simultaneously disables noise producing accessories such as fans and heaters at railroad crossings etc.
Operator’s Licence (driver’s licence)	– certification to operate a particular type of vehicle
Park Brake (emergency brake)	– the “hand” brake used by the driver when parked – not intended to be used for driving
Park Lamps (park lights)	– indicate vehicle presence from the front and rear when parked – not intended to be used when driving
Perception Time	– the time it takes for an operator to see a situation and analyze the danger
Reaction Time	– moving the right foot from the accelerator to the brake pedal when a danger is perceived and it is necessary to apply the brake to prevent a crash
Road (roadway)	– that part of a highway intended for use by vehicular traffic
Uncontrolled Railway Crossing (unmarked crossing)	– those that have no mechanical flashing lights or other safety devices



SERIES 4

**Emergencies, Bus Evacuations, First Aid, Emergency Equipment
and Mechanical Breakdown**

SERIES 4

Emergencies, Bus Evacuations, First Aid, Emergency Equipment and Mechanical Breakdown

SERIES 4.1: Assessing Collision Scene and Bus Evacuation Procedures

INTRODUCTION

No two collisions are ever quite the same. Consequently, the circumstances of a particular collision will dictate the priorities for action on your part.

To assess a collision quickly and establish priorities, there are three things that require evaluation.

1. The condition of the scene; assess and secure.
2. The types of injuries.
3. The need for immediate attention.

It goes without saying that a collision scene is a very confusing place. Most people tend to run around trying to be helpful, but not really knowing what to do. Therefore, it is essential that YOU be prepared to take control.

Note: *You, as a professional school bus operator, will be functional in a collision only if you are in control and alert. To increase the likelihood of this, you must always wear the seat belt provided and ensure it is properly adjusted. In taking control, you must establish priorities for action on the basis of the three evaluations you make.*

In all cases, your first concern must be to remove your passengers from the threat of further danger

For Example:

Danger of fire

Examples would be fuel leak, being near flammable material or if you were in a collision, and there was smoke from either vehicle.

Fire

If a fire has started on the bus, you must first attempt to remove everyone from its danger.

Unsafe position

If the bus is positioned across both lanes of traffic on a blind curve, there is a definite possibility of a further collision.

You should;

- move the bus off the road (if this is possible); or
- evacuate the passengers to a safe location if moving the bus is not possible.

Never begin first aid treatment until the safety of everyone is assured.

Your second priority is the treatment of injured persons. The types of injuries could be numerous. However, three types require prompt attention:

A – Airway

B – not Breathing

C – Circulation – severe bleeding and shock

Most people can be saved if they start breathing on their own or artificially within two minutes.

If a person is bleeding profusely, shock or death may result quickly.

With shock, the vital body functions are depressed. Death may result if not treated promptly, even though the injury which caused the shock is not severe enough to cause death on its own. Shock may result from injuries not readily apparent, even without physical injury.

Priority for treatment

A school bus collision may involve injury to a number of people. If several people are injured, and the scene permits, begin treatment promptly.

Treat breathing difficulties first, and then move quickly to those who are bleeding but still have a chance for survival. Then quickly move on to less serious injuries.

Except in situations of continuing danger or physical impracticality, treat a person where they are found and utilize those on the scene, including the casualties, to assist in the treatment, where feasible. In this way you can handle a number of injuries at once.

Assess, secure and protect the collision scene

The first action you must always take at the scene of a collision is to remove people from further danger. What you actually do in a given situation will depend primarily on the collision scene itself.

There are a number of factors which will dictate what you should and can do:

- the condition of the bus
 - is it on fire?
 - is there danger of fire? The presence of fuel, flammable liquids or gases
 - is it operational?
- the position of the bus
 - in the middle of the road?
 - in the ditch?
 - on it's roof?
- your personal condition
- the position of other vehicles

As a general rule, under most conditions, DO NOT MOVE the school bus until directed to do so by a police officer. However, the safety of the others may depend on you moving the vehicle to avoid a further collision with other road users who may not be able to see you clearly due to the nature of the terrain and the degree of visibility.

In such cases, by all means move the bus! And the safest place you can move it to is the extreme right of the road or shoulder of the road.

When the bus is in its final position, the following procedure is recommended:

- stop the bus completely; turn off the engine and remove the keys
- activate the hazard lights
- set the park brake and select the appropriate gear
- set out (or have a responsible passenger set out) emergency warning devices in accordance with the procedure described later
- reassure the passengers and do overall assessment for injuries
- Assign a bystander to direct traffic (if necessary). Make sure this person is responsible and will not endanger him or herself or others by directing traffic.

EVACUATION OF THE BUS

Usually the safest place for the passengers is to remain in the bus during an emergency. But, the following three situations will require that you evacuate the bus:

1. fire
2. danger of Fire
3. unsafe position

Fire

A bus should be stopped and evacuated immediately if the engine or any portion of the bus is on fire. Passengers should move to a safe point, a minimum of 35 metres, in the safest direction from the bus and remain there until you have determined that no danger exists.

Danger of fire

Being near an existing fire and unable to move the bus, or near the presence of fuel or other flammable material should be considered as “danger of fire”, and passengers should be evacuated.

Unsafe bus position

In the event that a bus is stopped due to a collision, mechanical failure, road conditions, or operator error, you must determine immediately whether it is safer for passengers to remain in the bus or whether the passengers should be evacuated.

You must evacuate if:

- the final stopping point of the bus is in the path of any train or immediately adjacent to any railroad tracks
- the stopping position of the bus may change and increase the danger. If, for example, a bus should come to rest near a body of water or precipice where it could still move and go into the water or over a cliff, it should be evacuated. You must be certain that the evacuation is carried out in a manner which affords maximum safety for the passengers
- the stopping position of the bus is such that there is danger of a collision with traffic on the highway. In normal traffic conditions, the bus should be visible for a distance of 300 metres or more. A stopped position just over a hill or around a curve where such visibility does not exist should be considered sufficient reason for evacuation.

EVACUATION PROCEDURES

There are three 'standard' ways to evacuate a school bus, although other methods can be devised for extreme situations.

The three standard evacuation methods are:

1. Everyone exits through the front entrance door
2. Everyone exits through the rear emergency door
3. Front half exits through the front door and rear half exits through the rear door (see diagrams).

NOTE: *All buses are equipped with emergency windows. These are only to be used if the standard exits are impossible to use due to position of the bus or damage to the bus. Buses may also be equipped with side doors and all school buses are equipped with at least one roof hatch. Also, the windshields, the rear windows to the right and left of the rear emergency door as well as the window in the emergency door are designed to be pushed or kicked out.*

Your assessment of the emergency will determine the type of evacuation to be performed. Always evacuate the passengers starting with those nearest the door that they will be going through.

Getting the passengers off the bus safely in the shortest time possible, in an orderly fashion is the objective, regardless of which method is used under a given set of circumstances.

It would be unrealistic to expect your passengers to complete this evacuation properly without practice.

You should carefully explain to all passengers who ride the bus what procedures you expect them to follow during evacuation drills and in the event of a real emergency.

You are responsible for the safety of your passengers; however, in an emergency you might be incapacitated in which case you would not be in a position to direct the passenger emergency evacuation.

The operator should select some older, responsible passengers to assist in the drills and they should also be instructed on what to do if the operator has been injured and is not able to direct the evacuation.

Helpers/leaders should be appointed and will assist in any emergency evacuation drills. In the event of a real emergency it may be advisable to also have alternates appointed. This will ensure that knowledgeable passengers are on hand should the regular helper or leader not be on the bus that day.

It is important for the helpers and leaders to know how to:

- turn off the ignition switch
- set the parking brake
- summon help where and when needed
- kick out windows
- set out emergency devices
- open and close doors, account for all passengers passing their station
- provide extra help for small passengers getting off bus and assist passengers with disabilities
- perform other assignments as required

Emergency drills for school buses should be organized in a manner similar to fire drills held regularly in schools.

Drills should be held on school property and not on the bus route.

Operators should stay in the bus during evacuation drills.

Be sure the parking brake is set, ignition is off, keys removed and transmission in the appropriate gear- neutral or park for an automatic transmission, first or reverse for a standard transmission.

Do not permit passengers to take lunch boxes, books, etc, with them when they leave the bus during an evacuation drill. Getting the passengers off safely in the shortest time practical and in an orderly fashion, is the objective of a school bus evacuation drill.

District policy may advise leaving the first aid kit and fire extinguisher on the bus - please discuss with your instructor. Normally the emergency equipment would be placed outside of the door being used for the evacuation. This procedure would enable the operator to access it quickly.

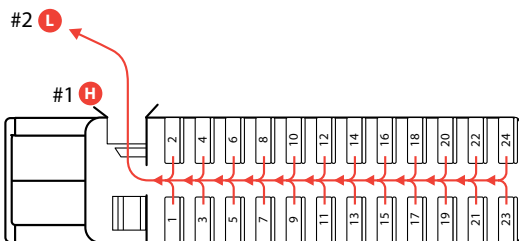
Every emergency situation is unique; however, in a real emergency you would have evacuated the injured as well, therefore the first aid kit would most likely be needed and should be accessible outside of the bus.

Note: *All evacuation drills should be approved and supervised by school personnel.*

Front Door Evacuation:

In considering a front door evacuation drill, the following steps should be used:

- stop the bus, set parking brake, turn off engine and remove key
- stand, open the front door, face the passengers and get their attention
- give the command: *“emergency drill, remain seated, front door evacuation”*
- **helper #1** is the first person off the bus. They stand outside of the bus by the front door and help the passengers off the bus. They also direct passengers to follow the leader to a safe location. Their job is to keep the flow of passengers out the door going smoothly but also safely and quickly.
- **leader #2** is responsible for taking the passengers to a safe area a minimum of 35 metres from the bus. They are the second person off the bus immediately behind helper #1
- everybody evacuating should have their hands free and not take anything out of the bus – getting out is first priority. It is the operator’s responsibility, if safe, to go back to the bus, if necessary and safe, to retrieve items
- the operator controls the order of evacuation. Passengers would start evacuating from the front of the bus alternating seats from side to side until all passengers have left the bus. The operator would be the last person off the bus after ensuring that all the passengers had left



- after you leave the bus, go to the safe area where the passengers are gathered. Advise them of things that could be done better next time or tell them that they did a great job.
- Then dismiss the passengers and allow them to proceed to class or if there are passengers who are to continue on to another school, have them board the bus and continue your run.

Rear Door Evacuation

In considering a rear door evacuation drill, the following steps should be used:

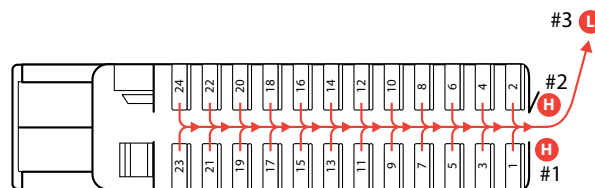
- stop the bus, set parking brake, turn off engine and remove key
- stand, face the passengers and get their attention
- give the command: **“Remain seated, this is an emergency evacuation drill, rear door”**
- advise the designated **helper #1** and **helper #2** to proceed to their stations on the ground at the back of the bus on either side of the open rear door. They are the first two off the bus
- everybody evacuating should have their hands free and not take anything out of the bus – getting out is first priority. It is the operator’s responsibility, if safe, to go back to the bus if necessary
- **leader #3** is the leader taking the passengers to a safe area a minimum of 35 metres from the bus. This is the third person off the bus.

The Designated Helpers Are Stationed:

Two outside of the bus at the rear door, one will count exiting passengers, and both will assist passengers leaving through the rear door.

Instruct: Proper Stance:

- two helpers at the open back door, on the ground, on either side of the back door, facing each other
- when the passengers are at the rear door they will assume the skier stance: knees bent, one foot slightly forward, arms are bent at the elbow and hands in a fist like they are holding a ski pole; body is slightly bent at the waist
- helpers will reach up, one hand cupping the evacuating passenger’s elbow and the other gripping the wrist firmly; when this has been achieved they will say **“NOW”**
- the evacuating passenger will then push off with back leg and step (not jump) to the ground with the assistance of the two helpers.



Remind the helpers that they do not pull the passenger from the bus and they do not let go of the passenger until they have firm footing on the ground.

At all times, after leaving the bus, there must be a safe distance about the width of a seat between each passenger.

All passengers are to be evacuated to a safe location at a distance of at least 35 metres away from the bus.

You will be constantly reminding the passengers:

- “walk, don’t run”
- “all lunch kits, school bags are to be left on the bus”
- “do not to leave your seat until it is your turn”
- “no pushing, keep a safe distance apart”; and
- “don’t step off the back of the bus until the helpers say “now”.”

The purpose of a drill is for passengers and operators to learn the proper procedure for an emergency evacuation. With thorough instruction and careful monitoring of the passengers, injuries can be prevented.

If your passengers are from kindergarten to grade four, the assistance of school staff is recommended when conducting a rear door evacuation practice. This is to ensure safety during the drill and provide reassurance to the very young children, however, in a real emergency, you most likely will not have this assistance.

The operator will be positioned at the back door, kneeling on the seat to assist and monitor the evacuation. This is the only way to ensure that your passengers are being taught the proper procedures and to prevent injuries.

This is an emergency evacuation drill - in an actual emergency the operator would be at the front of the bus directing the order in which the passengers would evacuate.

In the event that the operator was injured, the passengers would need to know and be responsible for the safe and orderly evacuation of the bus which is why periodic practice is so important.

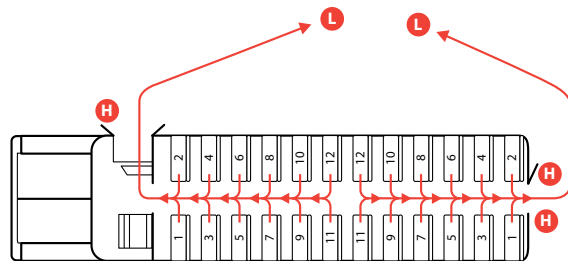
Split Evacuation

A split evacuation is when passengers use both front and rear doors to leave the bus. This is the fastest method of getting everyone off the bus in an emergency.

You will need to appoint leaders and helpers according to the diagram. Their duties will be the same as in the individual front or rear door evacuation drills.

Some points to remember:

- safety of the passengers is of the utmost importance and must be considered first
- the passengers should go to a safe location at least 35 metres from the bus in an “emergency drill” and remain there in a group until given further instruction by the operator
- in the event of injuries on the bus, evacuate the passengers who are able to get off the bus on their own first, then help those that require individual assistance



- wheelchairs or other mobility aids should be left on the bus if it is faster to remove only the person. In a practice drill, do not take the passengers out of their wheelchairs. (see Series 5)

Note: If the operator has their own preschooler on the bus with them by special agreement, the preschooler should stay with the operator throughout the evacuation and leave the bus with the operator only after all the other passengers have left.

Organize Bystanders to Render Assistance

A collision scene is frequently chaotic. In addition to those who are actually involved, there will likely also be bystanders around curious to see what's happening. In a very short time, bedlam and confusion could reign. It's hardly the type of situation conducive to cool, calm thinking. Yet, that is exactly what is required.

Most people who find themselves at the scene of a collision, excluding the injured, would like to help, but often do not know what to do. Unorganized, they tend to cause congestion and confusion at the scene. However, if you take charge and approach them in a calm, assertive manner, they can help you bring the collision scene under control by performing the following tasks:

- rendering first aid assistance
- finding witnesses
- directing traffic
- setting out emergency devices to protect the scene
- obtaining blankets, bandages, etc.
- notifying medical, police and/or school authorities
- supervising passengers.

There are many ways in which you could recruit others to help you. To maximize your chances of gaining cooperation and getting the job at hand done, the following points are suggested for organizing others to help you.

- remain calm at all times, this will instill confidence and increase the chances that they will be willing to follow your instructions
- select responsible individuals to help
- ask for their cooperation to carry out specific tasks

- outline the directions for your request briefly, but clearly, keeping to the point
- ask your assistant to repeat the directions back to you to ensure they clearly understand what is required.

This may seem somewhat formal and unnecessary, but rest assured that it is important. The extra few seconds it may take is a good investment. This is not a time for people to be coming back with the right solution to the wrong problem

- upon completion of the task, have the assistants report back to you on the successful completion, or other relevant information. This is important to avoid assumptions that certain tasks may have been done when, in fact, they haven't.

The following is an example of how you might give instructions to others to obtain their assistance in directing traffic around the scene.

"I need your help to direct traffic around the scene. I would like you to:

- *go about half a kilometre back down the road"*
- *begin to direct traffic around the crash"*
- *instruct people that everything is being handled and to keep moving slowly past the scene"*
- *would you repeat what I have just asked you to do?"*

In the event there aren't any other adults at the scene, send two responsible passengers to seek help.

SERIES 4.1: ASSESSING COLLISION SCENE AND BUS EVACUATION PROCEDURES

REVIEW WORKSHEET

1. A collision scene is a very confusing place. People try to be helpful but don't really know what to do. _____ must be prepared to take control.
2. You must establish priorities for action on the basis of the three evaluations you make. They are:
3. Your second priority is the treatment of injured persons. Three types of injuries require prompt attention. They are:
4. The three standard evacuation methods are:

SERIES 4.2: Using Emergency Equipment

All school buses must be equipped with:

- approved warning device triangle
- fire extinguisher
- hazard warning lights
- first aid kit

APPROVED WARNING DEVICE

These triangles must comply with the specifications established by the Society of Automotive Engineers J774.

All school buses must have a minimum of three of these items in the bus. They are used to warn other drivers of a problem or collision ahead, and this helps avoid any further problems at the collision or breakdown scene.

Properly placed and utilized warning devices protect your passengers, other drivers and yourself. Whenever a collision or breakdown occurs, you must put out the devices you have on your bus to mark and protect the scene.

Placement of these warning devices is most important. They provide a warning to drivers approaching from both directions to give these drivers ample time to slow down and make any necessary lane changes.

Alberta legislation requires that when during the period between sunrise and sunset, a school bus is stationary on a highway outside the limits of an urban municipality (other than when loading or unloading passengers); the person operating the school bus shall;

- cause the flashing emergency hazard warning lights on the vehicle to be activated, and

- place approved warning device on the highway in line with the vehicle at a distance of approximately 30 metres (100 feet) to the rear of the vehicle and at a distance of approximately 30 metres (100 feet) in front of the vehicle.

When during the period between sunset and sunrise, or at any time when there is not sufficient light to clearly see persons or vehicles on a highway at a distance of 150 metres (500 feet), a school bus that is stationary on a highway outside the limits of an urban municipality (other than when loading or unloading passengers), the person operating the school bus shall;

- cause the flashing emergency hazard warning lights on the vehicle to be activated, and
- place approved warning device on the highway in line with the vehicle at a distance of approximately 75 metres (250 feet) to the rear of the vehicle and at a distance of 75 metres (250 feet) in front of the vehicle.

HAZARD WARNING LIGHTS

When involved in a collision or other emergency situations, you must use the hazard warning lights on your bus as a further warning device in addition to the warning devices placed on front of and to the rear of your school bus. These are your four-way flashers and not your alternately flashing amber or red lights.

FIRE EXTINGUISHERS

Whenever a collision occurs, there is a chance of fire. You will always find a fire extinguisher securely fastened in the operator's compartment. While the types may vary, all are reasonably effective in putting out the fires you may encounter.

The dry chemical extinguisher

This is the type of extinguisher used on a school bus. It has a pin release and gives off a snow-like powder. This powder is forced from the extinguisher by pressurized gas. It is advisable during your pre-trip inspections to remove the extinguisher from the bracket and shake it once a week.

The range of these extinguishers, in the size likely to be on a school bus, is four to five metres. If you have an extinguisher of this type on your bus, be familiar with it so you know its range.

Direct the discharge at the base of the fire using a sweeping motion to cover the flames. For maximum coverage and personal protection, try to be upwind from the fire when using the extinguisher.

An extinguisher of the type generally carried on a school bus will totally discharge in approximately eight to 10 seconds. Therefore, proper technique is extremely important.

Even when the fire appears out, do not turn your back on it. Keep watch for flashback until the area on fire has completely cooled.

Extinguisher operation

While you encounter many extinguisher types, they are all used in basically the same way. The procedure is to:

- remove it from the bracket
- pull the safety pin by breaking the seal
- approach the fire from upwind if possible
- hold the extinguisher in an upright position
- point the discharge apparatus (hose, horn, nozzle) at the base of the fire, approximately two to three metres (six to eight feet) away
- don't allow the flames to come between you and the exit
- squeeze the handle
- continue to use until fire is out and extinguisher is fully discharged
- ensure all discharged fire extinguishers are replaced with fully charged ones before the bus is used again.

Remember the word PASS

- P** – Pull the pin
- A** – Aim low
- S** – Squeeze lever
- S** – Sweep from side to side

SERIES 4.2: USING EMERGENCY EQUIPMENT

REVIEW WORKSHEET

1. All school buses must be equipped with:
 - a)
 - b) Place approved warning devices on the highway in line with the vehicle at a distance of approximately _____ in front of the vehicle and at a distance of approximately _____ to the rear of the vehicle.
2. During the period between sunrise and sunset, the operator of a school bus that is stationary on a highway outside the limits of an urban municipality shall:
 - a)
 - b) Place approved warning devices on the highway in line with the vehicle at a distance of approximately _____ in front of the vehicle and at a distance of approximately _____ to the rear of the vehicle.
3. During the period between sunset and sunrise, or at any time when there is not sufficient light to clearly see persons or vehicles on a highway at a distance of 150 metres (500 feet), the operator of a school bus that is stationary on a highway outside the limits of an urban municipality, shall:
 - a)
 - b) place approved warning devices on the highway in line with the vehicle at a distance of approximately _____ in front of the vehicle and at a distance of approximately _____ to the rear of the vehicle.

SECTION 4.3: General First Aid

INTRODUCTION

First aid and the treatment of injuries were mentioned briefly in the section “*Assessing the Scene of a Collision*”. In this module, we want to introduce you to some general first aid principles that are considered basic knowledge for the school bus operator, as well deal with the treatment of specific injuries mentioned, namely:

- blocked airway or stopped breathing
- severe bleeding
- shock

This segment is NOT a formal first aid course. This segment has been kept basic and deals with only those subjects which are considered critical.

Operators are encouraged to complete a formal first aid training program – check with your supervisor regarding local policies on this.

A variety of first aid courses are offered which cover many more topics than are discussed in this session.

What is First Aid?

First aid implies just what the name says. It is what the first-responder can do to assist someone who has sustained an injury.

It embodies a number of principles which can be intelligently applied by the layman in almost any type of crash or emergency situation to care for the injured. Thus, it is a guide for practical action in emergency situations. It is by no means a substitute for qualified medical assistance.

Legal Protection For Those Providing First Aid

Section 2 of the *Emergency Medical Aid Act* States The Following:

Protection from action

2 If, in respect of a person who is ill, injured or unconscious as the result of an accident or other emergency,

- (a) a physician, registered health discipline member, or registered nurse voluntarily and without expectation of compensation or reward renders emergency medical services or first aid assistance and the services or assistance are not rendered at a hospital or other place having adequate medical facilities and equipment, or
- (b) a person other than a person mentioned in clause (a) voluntarily renders emergency first aid assistance and that assistance is rendered at the immediate scene of the accident or emergency,

the physician, registered health discipline member, registered nurse or other person is not liable for damages for injuries to or the death of that person alleged to have been caused by an act or omission on his or her part in rendering the medical services of first aid assistance, unless it is established that the injuries or death were caused by gross negligence on his or her part.

Note: Always exercise basic precautions when handling injuries. You should have both latex/non-latex gloves readily available at all times. Take the time to put them on. (Some individuals may experience an allergic reaction to latex rubber which is why non-latex gloves are also necessary).

DIAGNOSING INJURIES AND ESTABLISHING PRIORITIES FOR TREATMENT

Injuries may not be readily apparent immediately after a collision. Offer to help but do not move the person if head, neck or spinal injuries are suspected unless you have no choice (i.e., fire, danger of or unsafe position).

- determine the number of casualties and the severity of the injuries
- send for medical aid (ambulance / paramedics)
- where there are multiple casualties, check each in turn for life threatening injuries, and treat those immediately.

A – Airway

B – not Breathing

C – Circulation – severe bleeding and shock

When all life threatening injuries are dealt with you can check for other injuries.

- be alert for changes in A, B or C for anyone involved, even for those who didn't appear injured at first
- hand over to medical help when it arrives

When you check each person you can ask *"Where does it hurt?"* if you get a response you will be able to tell if there is a good airway and if that person's breathing is effective.

Control any obvious bleeding and do a rapid body survey (wet check) for hidden severe external and internal bleeding.

Have the person try and take a deep breath and cough. If they are able to it is unlikely they have a serious chest injury.

Have them pull in their stomach and blow out again. If there is no distress they are probably free from internal injury.

Warm, rest, reassure and into the recovery position for shock.

If breathing is ineffective, assess the rate and depth of breathing and assist if needed. (See artificial respiration).

If there is no response:

- remember that unconsciousness is a breathing emergency. Open the airway using a head-tilt chin lift if there is no suspected spinal injury, otherwise do a jaw thrust with NO head tilt
- maintain the airway and check for breathing by looking at the chest, listening and feeling for breathing
 - if effective, check for severe bleeding
 - if ineffective, assist as needed
- if NOT breathing, give two slow breaths, and then check for pulse. If a pulse is present, continue with artificial respiration. If pulse is absent start CPR (according to the most recent standard as provided with First Aid training) or move on if there are multiple serious casualties
- do a quick check and control severe bleeding
- if you find any deformities, have the injured part steadied and supported until medical help takes over.

Artificial respiration

- open the airway and check for breathing by looking at the chest. Also listen at the nose and mouth and feeling for airflow with cheek and with hand on chest. If there is no breathing then pinch the nose and ensure a mouth to mouth seal
- give two slow breaths
- check the carotid pulse – five to 10 seconds
- continue breaths – adults: one breath every five seconds, children: one breath every three seconds

- check pulse after one minute and every few minutes thereafter
- continue artificial respiration until person is breathing unassisted or medical aid takes over, treat for severe bleeding and shock and check for other injuries
- watch for changes in condition until handed over to medical aid.

Severe bleeding

If you suspect internal bleeding – send for medical help immediately.

Signs:

- sharp blows
- deep punctures
- crush injuries
- massive bruising
- bleeding from mouth, ears and/or nose
- coughed up frothy blood.

Symptoms:

Ask the person to take a deep breath and cough, if no pain, unlikely to have internal bleeding, serious chest injury or broken ribs.

Ask the person to suck in and then expand stomach. If no distress or hardness in the area, then internal bleeding or injury is unlikely.

Treatment of Severe External Bleeding:

- expose wound
- lie the person down or at rest
- elevate wound
- direct pressure applied to the wound.

To Bring Bleeding Under Control, Follow These Steps:

- apply direct, even pressure over wound with dressing if possible, use hand if necessary
- if blood soaks through dressing, do not remove but apply more dressing

- when bleeding has stopped, apply bandage.
- check skin temperature of limbs and nail beds for circulation
- elevate limb above heart level, except where there is a possible fracture
- treat for shock, monitor for circulation. If transporting apply sling.

Dressings:

Must be sterile, absorbent, lint free, non sticky and large enough to cover wound. Dressings control bleeding and prevent further infection.

Bandages:

Hold dressings in place, maintain pressure over wound, support limb or joint, immobilize and secure a splint. Can be improvised with a tie, adhesive tape, scarf, pillowcase or tea towel.

Shock:

Is always present to some degree with any injury or illness. (Remember: the person may not be aware that they are in shock). Shock is caused by loss of circulation. Even if the symptoms of shock are not evident, the person should be kept warm, quiet, at rest, and be reassured.

Signs:

- shallow rapid breathing
- weak and rapid pulse
- restlessness and anxiety
- gasping for air
- vomit
- unconscious

Symptoms:

- feels faint
- thirst
- nausea
- anxiety
- dizzy

To treat for shock you must give timely efficient first aid. The person must be kept warm, calm and in the right recovery position for the type of injury.

The recovery positions are as follows:

Suspected Spinal Injury:

- steady and support the head and neck, cover with blanket
- keep warm
- keep in position found

Unconscious: (no obvious injuries)

- recovery position
- wrapped or covered with blanket
- keep warm

Conscious: (with breathing difficulties)

- semi sitting, cover with blanket
- keep warm

Conscious: (with no breathing difficulties)

- laying on back, elevate feet 15 to 30 cm
- loosen tight clothing

With all casualties, loosen tight clothing, handle gently, keep warm with blankets, give nothing by mouth but moisten lips if needed.

At all times reassure and be alert for changes in condition

Choking

Ask if the person is choking, encourage them to keep coughing. If there is very poor or no exchange of air (bluish skin, unable to speak or cough) do abdominal thrust:

- landmark – make a fist and place midway between the navel and the point where ribs meet on the chest and pull the fist into the person's abdominal area

- repeat the thrust until airway clears or person becomes unconscious
- send for medical help as soon as the person loses consciousness.

With the person on their back, open the mouth with a tongue–jaw lift, then finger sweep (on larger children or adults only) to try to find and dislodge the obstruction, then: try to blow air in, if none goes in:

- landmark
- do five abdominal thrusts (astride legs)
- repeat the sequence until successful
- treat for shock

Always make sure that the person is seen by a medical doctor if abdominal thrusts have been used.

Fainting

If the bus is too hot, the passengers are overdressed or are reacting to the sight of blood you will often have a person who feels faint or faints.

Signs:

- pale
- sweating

Symptoms:

- nausea
- dizziness

Treatment:

- shock position
- fresh air
- loosen tight clothing at neck, chest and waist
- remove glasses, make sure that person is breathing

If Person Has Fainted:

- check breathing
- check for any injuries the person may have suffered from fainting
- recovery position
- if not fully recovered within minutes, send for medical aid
- keep lying down for 10 – 15 minutes
- monitor breathing frequently.

Burns

There are many different types of burns, and each must be handled a little differently. The causes and treatments are as follows:

Causes:

- heat
- chemical
- electrical
- sun

Severity:

- how much of the body is burned
- location and depth
- person age and health

Superficial:

- reddened skin
- swelling
- blistering
- severe pain

Deep:

- Charred Skin,
- Little or No Pain

Treatment:

- do not apply lotions
- do not break blisters
- do not touch, breath or cough on burn
- do not remove any clothing stuck on burn
- do not cover with cotton wool

Heat Burns:

- remove jewellery
- immerse burn in cool water until cool
- cover with sterile dressing
- secure the dressing
- send for medical aid
- treat for shock

Chemical:

- brush off powdered chemicals before flushing
- remove affected clothing and flush skin with cool running water 10 – 15 minutes
- cover with moist sterile dressing
- send for medical aid
- treat for shock

Electrical:

- turn off electricity before touching or approaching person
- call for an ambulance
- there is often cardiac arrest, stopped breathing, fractures, dislocations, and severe internal burns
- treat life-threatening injuries.

Cover burns with clean dry dressings at point of entry and exit to prevent further infection.

Continue to monitor person for changes while waiting for the ambulance.

Poisoning:

There are many different types of poisons and many of the products we use daily can be poisonous in larger quantities.

Poison: Any substance that can harm or kill you if taken into the body.

It can be:

- swallowed
- inhaled
- injected
- absorbed through the skin

If you suspect poisoning, act immediately.

Quickly find out:

- what poison?
- how much?
- how did it enter the body?
- when it was taken?

Call poison information centre:

Provincial: 1-800-332-1414

- Answer questions.
- Do what they say.
- Retain any vomit if poison is unknown.

A very dangerous situation with a vehicle can be caused by the colourless, odourless gas known as carbon monoxide.

If there is an undetected exhaust leak into the vehicle and there is not enough fresh air, the person will have some of the following symptoms:

Symptoms:

- headache, irritability, fatigue
- unconsciousness
- reddish discoloration of the skin

Treatment:

- remove the person from the poisoning source and to fresh air
- give artificial respiration if breathing is weak
- keep the person warm and away from draft
- keep the person at rest, with the head slightly lower than the feet

Cold Injuries:

Symptoms and Treatment of Cold Injuries:

Hypothermia is a term referring to the dangerous lowering of the body’s core temperature.

Contrary to popular belief, hypothermia can occur at above freezing temperatures and in a relatively short time depending on age, size, dress, etc. and it is progressive as shown in the following chart.

Signs	Mild	Moderate	Severe
Pulse	normal	slow and weak	weak, absent, or irregular
Breathing	normal	slow, shallow	slow or absent
	shivering, slurred speech	shivering is violent or stopped, clumsy, stumbles	shivering has stopped
Mental State	conscious, withdrawn	Confused, sleepy, irrational	unconscious

Treatment:

- handle gently
- remove from cold
- remove wet clothing
- gently warm (body heat and blankets)
- give warm sweet drink if conscious (no coffee or alcohol)
- do AR or CPR if needed
- remember to warm the body core rather than the limbs.

Frostbite is characterized by numbness of the affected area accompanied by a loss of coloration of the skin. While severe frostbite, involving damage to tissue, requires medical attention, it may be treated initially in the following manner:

- get the person into shelter and warmth if not already there
- remove anything constrictive from affected area, such as gloves, rings or boots
- gradually warm area with warm dry covering or with body heat, gentle steady pressure
- do not warm if there is a danger of refreezing the area before receiving medical attention
- do not rub the affected area
- do not apply direct heat in any form
- remember that if the frostbite is severe, treat it gently and leave the area frozen until medical help is obtained.

GENERAL FIRST AID PRINCIPLES

Undoubtedly, if you are ever involved in a serious school bus crash, it is quite likely that there may be more injuries incurred than those discussed previously. It is not the intention of this session to provide enough information to have you become a medical expert. Rather, you should become competent in a few basic principles which will allow you to deal quickly and effectively with both common and critical injuries.

There are a number of basic first aid principles which are applicable in every case, regardless of the nature of the injury. In carrying these out, you will do much to preserve the lives of the injured until the person or casualties are transported for medical attention.

The Principles Are:

Arrange for medical attention:

- the best procedure to follow is to take the person (if necessary by ambulance) to the emergency room of the nearest hospital
- getting proper medical help quickly is important because a major factor in saving lives and limbs of those who are seriously injured is early medical assessment.

Keep the person quietly at rest particularly if badly injured or if the nature of the injuries is unknown.

Organize bystanders to give assistance. Some bystanders may have knowledge of first aid; others should be sent to obtain assistance or blankets, direct traffic, etc.

Provide warmth. It is important to keep the casualties warm by placing blankets, coats, etc. over and under them.

Give plenty of reassurance. Fear and anxiety are frequently the most distressing aspects of traffic collisions. Words of comfort help slightly, but an attitude of efficiency and calmness will do much more to give the person confidence and relieve his or her fear.

Emergency Contact List:

Police	_____

Fire	_____

Ambulance	_____

School	_____

Garage	_____

Other	_____

Prior to any trip, obtain local emergency numbers of the areas on route.

SERIES 4.4: General Procedures for a Mechanical Breakdown

Even though you can't possibly know when a mechanical breakdown is going to occur, you can be prepared to handle it by knowing your route and the best pull-off positions, the location of public telephones if no cell phone or radio available, and who to call. You should also know your school jurisdiction's policy on sending for assistance.

WHAT TO DO:

- stop the bus as far to the right of the road as practical or on the shoulder of the road
- secure the bus, activate the hazard warning lights, engage the parking brake
- keep the passengers in the bus unless it is unsafe
- if the location of the bus is unsafe, remove the passengers to a safe location minimum 35 metres – see bus evacuation procedure
- place emergency warning devices in accordance with *Commercial Vehicle General Equipment and Safety Regulation (AR 435/86)*
- telephone, radio or send two responsible passengers to call the proper authorities, giving the location of the bus and description of breakdown. Write down the information that the passengers will need
- see that all the passengers are delivered to their destination
- complete maintenance repair reports

PUTTING IT ALL TOGETHER

When an emergency does occur it will take some very quick, calm thinking to carry out everything that will have to be done. There is no definite sequence of procedures that can be dictated in advance for all eventualities. Circumstances will vary in every case, therefore, you must be flexible.

There are some general rules to keep in mind to guide you in your actions:

1. Assess and secure the scene, removing the possibility of further danger before doing anything else with a view to:
 - moving the bus (if able); and/or necessary
 - evacuating the bus
 - setting out (or having someone set out) emergency warning devices
 - extinguishing fires
2. Provide care to the injured after #1 has been carried out:
 - send for medical aid
 - begin first aid
3. Take care of everything else.
 - notify proper authorities, etc.

How you go about using emergency procedures can perhaps best be illustrated as follows:

1. Assess the scene of the collision
2. Protect the scene and those involved
3. Send for help – treat injuries
4. Notify appropriate authorities

SERIES 4.4 GENERAL PROCEDURES FOR A MECHANICAL BREAKDOWN

REVIEW WORKSHEET

1. In an emergency, what are some general rules to keep in mind to guide you in your actions?

SERIES 4 – GLOSSARY OF TERMS

Term	Definition
Emergency Evacuation Drill	– practice to get passengers off the bus safely, in the shortest possible time, in an orderly fashion
Hazard Flashing Lamps (four way flashers; hazard flashing lights)	– flashing lights indicating vehicle presence when the vehicle is broken down or unexpectedly stopped



SERIES 5

Passengers with Disabilities, Mobility Aids and Child Safety Seats

SERIES 5

Passengers with Disabilities, Mobility Aids and Child Safety Seats

Series 5.1: Awareness of Persons With Disabilities

INTRODUCTION

A good operator needs knowledge, skill experience and the right attitude. Whether you drive a school bus, taxi or handi-van for persons with special needs, the right attitude is based on professionalism and excellent customer service.

Excellent customer service doesn't happen by accident. It comes from knowing your passengers, knowing your job and knowing yourself.

This module is a tool to help you achieve excellence in customer service.

Operators and bus owners wanted to know more about communication skills, special needs, techniques and procedures to ensure passenger comfort and safety when transporting passengers with disabilities.

The best place to begin your training is to take an attitude check.

What are your attitudes towards persons with disabilities? Take a close and careful look at any stereotypes you might hold. What exactly do you know about different disabilities and how they affect people?

If you are an operator with the right attitude, you will always see your passengers as people first and foremost. Remember, also, that your attitude and commitment to customer service will convey an image to not only your passengers, but also to your community. It's up to you to make that image one of a caring professional.

One final point. Like your colleagues in the health care field, you may learn or overhear a great deal of personal information about your passengers while on your route. To protect their privacy, you must be discreet and keep this information to yourself, on the bus or off.

KNOW YOUR PASSENGERS

Any successful business or operation rests on a thorough knowledge of its customers or clients. As an operator, your business is no different.

Your passengers are your customers, and you must know their needs to do your job with confidence and competence.

To know your passengers, you should know the characteristics of the disability they may have and how they can affect people. These facts will determine how you drive, the kind of assistance your passengers may require in getting on or off the school bus, and the measures required to ensure their safety on the route.

The following list of disability awareness descriptions provides details you will find helpful to serve your passengers better. But the best way to gather the information is very simple:

Just ask.

- Ask your passengers how you can best assist them.
- Inform them of your actions before you do anything and check if it is the best approach.
- Keep asking until you get it right.

Operators sometimes hesitate to ask, and passengers don't always volunteer details out of shyness or embarrassment.

With unfailing courtesy, carry out your customer research and ask your passengers what they need. Do NOT ask: "What is wrong with you?"

WORDS WITH DIGNITY

The Premier’s Council on the Status of Persons with Disabilities has provided the following list of words with dignity to help you in communicating with your passengers.

Website:

http://www.seniors.gov.ab.ca/CSS/premiers_council/

Use:	Instead of:
Person with a disability	Disabled / Physically Challenged/ Victim/Sufferer/ Cripple
Person who has or person with	Crippled by, afflicted with, suffers from
Limited mobility	Lame
Wheelchair user	Confined, bound, restricted, or dependant on a wheel chair
Person using a wheelchair	Person in a wheelchair
Able bodied or non-disabled	Normal
Person with hearing and/or speech impairment or person who is deaf	Deaf and dumb, deaf mute
Person with a developmental disability	Retarded, mentally retarded
Person with Cerebral Palsy	Spastic (as a noun)
A person born with	Deformed, congenital defect

This list is by no means complete, but it is designed to provide a brief description and some insight. It is intended as information ONLY and should not to be used as a medical reference. It is information that will be helpful for you to know what kind of situations you may be dealing with and how the individuals may be affected by them.

DISABILITY AWARENESS

A person with a disability is first and foremost, a person. This is why we start the description by saying this is “a person” and then, secondly, we mention that this person has a “disability”.

Treat these people the way you want to be treated, with:

- concern
- respect
- dignity
- understanding.

Learn to recognize the symptoms and limitations of particular disabilities.

Being a school bus operator, there needs to be additional emphasis that your passengers are still children and as such, are more dependant on adult support and help and they may be unaware of their needs or not sure how to express those needs.

You will have to establish clear procedures on obtaining information from parents and school personnel and discuss with them the individual passengers’ needs, what precautions are necessary and advice on how to handle individual situations.

Special needs children will require considerably more supervision, structure and assistance than adults.

As with any disability, the symptoms and needs can range from minimal to profound. Although there are some common elements for each disability, condition or syndrome, there are probably more differences in the needs of the individual passenger with the condition than there are similarities.

The amount and type of help required, and the precautions necessary for transportation will vary tremendously. Some passengers with disabilities will require no assistance and may not be distinguishable from those without a disability. Others will require major modifications to both equipment and procedures.

The following definitions will provide you with background information and some very general ideas, but it is up to the operator to personalize this knowledge to the individual passenger.

PHYSICAL DISABILITIES

Physical disabilities are wide ranging, having to accommodate wheelchairs, walkers and other specialized mobility aids.

Blindness and Visual Loss:

Visual impairments range from slight visual loss to total blindness. Some passengers have blind spots in their visual fields or experience tunnel vision, while others are only intermittently affected by factors such as light, emotions or fatigue.

Recognizing some of the symptoms include:

- facial distortions
- abnormal squinting
- a preference for seeing things only at a distance or close range
- headaches
- nausea
- dizziness

- frequent blinking
- complaints that objects are blurry.

Feel comfortable about using such words such as “see” or “look”. They are part of everyone’s vocabulary.

Speak directly to the student.

If student is accompanied by a certified guide dog, or service dog, do not touch or distract the dog without the owner’s permission.

Deafness and Hearing Loss:

The term ‘hearing loss’ is used to describe all types of hearing problems ranging from minimal loss to total deafness. Passengers with severe hearing loss are usually diagnosed when they are young. Those with mild or moderate loss, who hear enough to develop some language capability, are often diagnosed later. Hearing loss may be genetic, caused by certain childhood illnesses, accidents or injuries.

Some symptoms include:

- frequent daydreaming
- difficulties following verbal directions
- passive participation
- socially isolated
- inappropriate behaviour when interacting with peers
- low self esteem.

Face the passenger to make lip reading easier and speak in a natural tone at a moderate speed.

- use the buddy system by having another passenger help; and
- keep a pencil and paper in the vehicle.

Muscular Dystrophy:

Muscular dystrophy is not a single condition but the name of a group of muscle disorders characterized by progressive degeneration of muscle fibres. It is a disorder that is caused by a faulty or missing gene, either inherited or occurring as a spontaneous mutation.

Recognizing muscular dystrophy symptoms include:

- progressive difficulty with everyday activities
- enlarged calf muscles as fatty tissue replaces muscle
- slow motor development
- unsteady walk
- slurring of words as the mouth and tongue muscles weaken.

Ensure that required modifications are made to the bus to accommodate any mobility aids. The passenger may require assistance on and off the steps of the bus.

Spina Bifida:

Spina bifida is a birth defect of the spinal column caused when one or more of the individual vertebrae fail to close completely, leaving a defect in the spine.

The severity of the defect varies. In its least severe form, functional problems are minimal. In severe form, the cord and its coverings bulge out through the spinal column.

As this happens, nerves are damaged interrupting messages from the brain, often resulting in a lack of bladder and bowel control and paralysis. The degree of paralysis depends on the location and extent of spinal cord damage.

Ensure that required modifications are made to the bus to accommodate any mobility aids.

Cerebral Palsy:

Cerebral palsy is a result of damage to the brain during pregnancy, at the time of birth or in early infancy. The severity of damage ranges from minimal functional problems to a severe lack of muscle coordination and no speech. The condition is not progressive.

Many of these passengers have normal learning skills and intellectual development. Some are able to care for themselves and to walk unaided while others require specialized transportation.

Ensure that required modifications are made to the bus to accommodate any mobility aids.

BEHAVIOUR DISABILITIES

These are disabilities in which inappropriate behaviours manifest themselves in varying degrees.

Autism:

Autism is caused by a physical disorder in the brain that causes lifelong developmental disability.

Passengers with autism fail to develop normal social skills, often preferring to be alone. They have difficulty processing information and experience sensory overloads and over lapping messages that result in abnormal behaviour ranging from passive to aggression.

Bizarre behaviour patterns are very common and may include:

- repeated mimicking of the actions of others
- complex rituals
- screaming fits
- rhythmic rocking
- arm flapping
- finger twiddling
- crying without tears
- gesturing rather than speaking

- inappropriate laughing and giggling
- extreme mood swings from inconsolable crying to uncontrollable laughing
- repetitive and aggressive to extremely passive or self injurious.

Many of these children may react to sounds by banging their head or flapping fingers.

A common characteristic of individuals with autism is an insistence on consistency and sameness. There may be strong reactions to changes in food, clothing, and routines.

These passengers may panic when faced with changes in routines, therefore, allow the passenger time to become familiar with new routines and environments and maintain these with few variations.

Trigger words – Contact the parent/ care giver/ school to see if there are any triggers that will affect the child's behaviour on the bus.

BEHAVIOUR DISORDERS

Violent Passengers:

This type of passenger may, with little or no provocation, become violent. When dealing with these passengers, you should seat them on your right side as close to the front of the bus as possible. Then using the mirror as a monitor, you will be more likely to observe an abrupt change in their behaviour giving you time to safely pull over and deal with that situation.

Self-Abuse Passengers:

This type of passenger can initiate self abuse over any relatively minor incident. When this occurs, the best thing for you to do is to pull the bus over in a safe location and attempt to console the passenger. You should be aware that when dealing with these passengers they can bite or scratch you without warning.

Sexually Aggressive Passengers:

Passengers who have an aggressive sexual nature require special handling. There are many incidents that may occur such as foul language, touching and removing clothing. The most reasonable solution when dealing with these passengers is to isolate them. Also, removing them from the proximity of their victim can help alleviate the situation especially when touching is involved. Police may have to be involved.

Tourettes (also known as Gilles de la Tourettes):

Tourettes syndrome is a neurological or neurochemical disorder characterized by tics – involuntary muscular movements, uncontrollable vocal sounds and/or inappropriate words.

Symptoms occur during childhood, more often in boys, and are often mistaken for a psychological illness.

The condition ranges greatly in severity, and is usually life-long. The most severe cases demonstrate many involuntary movements such as

- facial twitches
- arm movements
- stretching
- vocal tics such as grunting, humming, burping and swearing.

Passengers with milder cases may present themselves as being

- fidgety
- restless
- impulsive
- have a short attention span.

Most have problems with academic tasks and difficulty in getting along with others.

Accept the passenger ‘as is’ – the tic is not deliberate or an attempt to get attention or disrupt an activity.

Fetal Alcohol Syndrome:

Children of mothers who consumed alcohol during pregnancy may have a number of characteristics which affect their performance in later life. Individuals with fetal alcohol syndrome may have problems which require little or no assistance while others have major problems.

Common characteristics include:

- slow to develop- often two or more years behind children of the same age
- delayed speech development
- impaired vision
- inappropriate social behaviour
- easily frustrated
- mood swings
- emotional outbursts
- underdeveloped sense of responsibility
- frequent illogical thinking
- difficulty in making decisions
- difficulty in following instructions and completing tasks.

Be precise in instructions and repeat them as often as necessary. The child will need help to understand each step in a task.

Seat them where distractions are limited.

Attention Deficit Disorder / Attention Deficit – Hyperactivity Disorder:

Children with ADD/ADHD have shorter attention spans compared to others their age, and are distracted by all the different stimuli in their environment or by their own internal thoughts.

A frequently associated condition is hyperactivity, where children are always on the move, fidgeting, squirming, tapping feet, fingers or pencils, not able to sit still in their seat.

ADD/ADHD children frequently don’t seem to listen and frequently interrupt.

Seat them where distractions are limited.

Oppositional Defiant Disorder (ODD):

A child with ODD is usually much more difficult to deal with than a child who has ADHD. A child with ADHD may impulsively push another child too hard on a swing and knock the child to the ground, and then generally feel bad about it afterward. However, a child with ODD may say they didn’t do it, and then brag about it to friends later.

ADHD sometimes goes away without intervention, but ODD rarely does. ODD is usually characterized by aggressiveness, rather than impulsiveness. The child will purposefully annoy people with the intent to ‘get a rise’ out of others.

The child does not have difficulty with concentrating or sitting still.

Conduct Disorder (CD):

Severe ODD may develop into CD and the common thread that separates them is safety. If a child has CD, then there are concerns for the safety of others and their property. Behaviours such as fire setting and vandalism are common in CD and often the safety of the child is also a great concern.

Characteristics are generally severe disobedience and opposition to authority. Hostility is shown through physical aggression and is persistent both inside and outside of the home setting. The basic rights of others or age appropriate societal rules are often violated.

Learning Disabilities:

Includes a variety of disorders, probably neurological in origin, which result in:

- poor but uneven school performance
- disorganized thinking and actions
- short attention spans
- impulsivity
- memory problems
- poor coordination
- difficulties with social relationships.

These passengers have average or better than average intellectual ability.

- They benefit from clear rules and expectations and a calm non-distracting environment.
- Seat them where distractions are limited.

Emotional Disturbance

A passenger who is emotionally disturbed may exhibit a wide variety of behaviours depending upon the severity of the disturbance.

The term 'emotional disturbance' is most frequently used by psychiatrists and psychologists as the basis upon which to determine appropriate strategies for working with the passenger and family.

The behaviours can include:

- withdrawal
- depression
- obsessive concerns regarding emotional control
- unrealistic self-perceptions.

Recognizing some of the emotional disturbance symptoms include:

- inability to handle social, emotional or academic situations well
- frequent frustration without apparent cause
- impulsiveness

- feelings control behaviour
- overreactions to trivial events
- inability to perceive the consequences of a behaviour
- difficulty initiating and maintaining interpersonal relationships
- withdrawal.

Let the passenger know which behaviours are acceptable and which ones are not. Be as specific as possible. Clearly outline ways you will deal with the behaviours (consequences).

Stop unacceptable behaviours in a firm, professional manner and deal with the passenger immediately, preferably away from the rest of the group. Avoid power struggles.

Let the passenger explain the behaviours, reactions and emotions involved. Introduce acceptable alternatives. Help the passenger to learn to 'own' their feelings and external behaviours.

MEDICAL DISORDERS

Medical disorders may be life threatening and require immediate attention.

Allergies:

An allergy is the body's overreaction to usually harmless substances called allergens. The most common allergens are pollen, dust, insect bites, moulds, pets and a variety of foods such as peanut butter.

Recognizing some of the symptoms include:

- chronic cough
- wheezing
- runny nose
- sneezing
- itchy puffy eyes.

Note: *Extreme allergic reactions can be fatal.*

Be familiar with any treatment that the passenger may be using like bronchodilators, antihistamines, and adrenalin kits, (EpiPen or AnaKit):

- It may be necessary to seat the passenger in a well ventilated area of the bus.
- Encourage the passenger with food allergies to avoid swapping lunches on the bus.

Asthma:

Asthma is a chronic disease that causes the airways in the lungs to become constricted, leading to breathing difficulties. An attack may last from a few minutes to several days.

Although asthma is not a psychological disorder, it may be triggered by emotional factors.

Be aware that these passengers will carry with them relievers, bronchodilators, preventers, anti-inflammatory inhalers and peak flow metres.

It may be necessary to seat the passenger in a well ventilated area of the bus.

Epilepsy:

Epilepsy is a disorder of the brain. It is not a disease nor is it a mental disorder. It is characterized by recurring seizures of varying severity which are caused by uncontrollable electrical discharges in the brain.

There are two categories of seizures.

- If the whole brain is involved, the seizure is considered to be generalized and would either be the convulsive or non-convulsive kind.
- If the excessive electrical discharge is limited to one part of the brain, the seizure is partial.

A convulsive seizure may last from two to five minutes and some of the symptoms include:

- muscle stiffening and jerking
- some breathing difficulty
- saliva forming around the mouth.

A non-convulsive seizure may last from five to 15 seconds and some of the symptoms include:

- brief interruptions of consciousness
- small muscle facial movements
- irregular eye movements and confusion.

During a generalized seizure:

- turn the passenger on their side to allow the saliva to flow
- loosen tight clothing
- cushion the head to soften the impact of the seizure
- talk calmly to the passenger and allow the seizure to run its course.

During a partial seizure complete consciousness is not lost. Some of the symptoms include:

- inappropriate movements
- plucking at clothes
- smacking lips
- aimless wandering
- confusion.

No first aid is required during a partial seizure. A partial seizure may lead to a generalized seizure.

Don't give a person with an epileptic seizure anything to drink.

Diabetes

Diabetes results from the failure of the pancreas to produce hormone insulin. Without insulin, the body does not absorb sugar. The supply of insulin in the body may be stimulated by oral medication and/or it may be replaced by an injection.

Diabetes can be controlled through planned eating, insulin supplementation and regular physical activity.

There are two types of diabetic emergencies that you may face and they are

- high blood sugar (hyperglycaemia)
- low blood sugar (hypoglycaemia).

High blood sugar is caused by overeating, lack of insulin, stress, injury and the symptoms include:

- thirst
- labored breathing
- fruity odor to breath
- drowsiness
- confusion and eventual unconsciousness.

Low blood sugar is caused by too much insulin, delayed or skipped meals and increased exercise without extra food and the symptoms include:

- nervousness
- trembling
- shaking hands
- confusion
- disorientation
- irritability
- difficulty speaking
- dizziness, and eventual unconsciousness.

Have sugar or juice on hand at all times and never hesitate to give sugar, even when in doubt about the onset of a reaction.

When necessary only for a child with diabetes, allow snacks to be eaten on the bus even during field trips and altered school hours.

DEVELOPMENTAL DISABILITIES

Mild Mental Disability

The passenger with a mild mental disability is usually delayed in most academic subjects and social behaviour as compared to their peers of the same age.

Moderate Mental Disability

The passenger with moderate mental disability requires significant modification to the basic school curriculum, but is able to profit from instruction in living and vocational skills and acquire functional literacy and numeric skills.

Severe Mental Disability

The passenger with severe mental disability has severe delays in all or most areas of development. A passenger in this category frequently has other disabilities including physical, sensory, medical and behavioural.

This passenger requires constant assistance and/or supervision in all areas of functioning including daily living skills, and may require assistive technology.

-
- Don't rush. Take your time.
 - When in doubt, ask.

Ensure that required modifications are made to the bus to accommodate any mobility aids.

Downs Syndrome

Downs syndrome is a genetic defect causing limitations in physical and cognitive development. The only common feature to all persons with Downs Syndrome is some degree of mental disability.

They may have any or all of the following symptoms:

- small head
- flattened to some degree at the back
- upward slanting eyes
- small mouth cavity
- the tongue may protrude
- stubby hands and feet
- short fingers
- low muscle tone
- muscles appear relaxed and floppy
- stocky build.

Be aware of any medical problems or medication.

Gain attention with simple, precise commands.

Phrase questions simply and allow them time to respond.

GENERAL GUIDELINES:

Know about your passengers and what they need.

Know where important information and safety equipment is kept.

- the route
- manufacturer’s instructions for lifts and securement systems
- the seating plan
- emergency information
- special medical information
- emergency equipment such as fire extinguishers and first aid kit.

Exercise universal precautions. You should have:

- body fluid clean-up kit
- latex gloves, and
- non-latex gloves at all times.

Only do what is within your technical expertise. There are lots of other resources to assist.

In conclusion, this provides you, the operator, with some insight as to the type of things you may encounter on the job.

Don’t be shocked into quitting, because the real enjoyment and satisfaction you receive from working with these children can be very rewarding.

If you talk to others about your work, please remember not to use specific names. This can be applied to shop talk as well. Everyone is entitled to their privacy. You can never be sure who may overhear and be offended by your remarks.

SERIES 5.1: AWARENESS OF PERSONS WITH DISABILITIES**REVIEW WORKSHEET**

1. To know your students, you should know the _____ of the _____ they may have and how they can _____ people.
2. When dealing with blindness and visual loss, you should feel comfortable using such words as _____ or _____
3. The term _____ is used to describe all types of hearing problems.
4. List three behaviour disorders mentioned in the course material:

SERIES 5.2: Just ASK: Communicating With Your Passengers

INTRODUCTION

School bus operators, owners and passengers have identified communication as their number one priority.

Two simple rules:

- see the person first, not the disability
- never assume anything.

The same disability can affect people in different ways at different times. Above all, be patient and courteous, and understanding of your passengers' needs.

Operators need to recognize that there is a difference in how we work with and transport passengers with disabilities. Policies may be the same, but the abilities of the passengers with special needs may be unique and very different.

The *Handi-Bus Operator's Handbook* published in 1995 by the Calgary Handi-Bus Association offers a formula for customer satisfaction.

Attitude + Skill + Knowledge (ASK) = Satisfaction

In other words, ASK your passengers what you need to know. The handbook also includes the following general guidelines to use in working successfully with your passengers. They are reprinted here with minor changes through the kind permission of the Calgary Handi-Bus Association:

- take time to discover each person's method of communicating. Some people, for example, may respond only in writing or by sign language. The general rule is to **ask** if there is anything you need to know and to **inform** the person what you are doing before you do it
- have respect when talking with a person who has a disability. Speak directly to that person and try to attract their visual and hearing attention at the same time. Do not overlook the person with a disability by asking a companion for information, as if the person with the disability was not present
- call a person by their first name only when extending that familiarity to all others present
- be patient, attentive and encouraging when talking to a person who has difficulty speaking. Do not correct or speak for the person. When necessary ask short, simple questions that require short answers, a nod or shake of the head. Speak clearly in a natural tone of voice
- listen carefully and repeat words you have understood. If you have not understood something, say so. Never pretend to understand if you are having difficulty doing so. Repeat what you do understand. The person's reaction will guide you to understanding. You may need to repeat several times what you are trying to communicate. Try to determine whether the person has understood you
- be patient and realize that it might take extra time for a person with a disability to get things done or said. Let the person with the disability set the pace
- when talking with a person using a wheelchair or mobility aid for any significant period of time, place yourself in front of them, at their eye level, to spare both of you discomfort

- never assist a person using a wheelchair or mobility aid without first telling them what you are doing. Even if you are aware of what must be done and can easily see what is going on, do not assume that the other person also knows. Often they are not aware because they look forward and can be surprised by sudden movements
- offer ambulatory people assistance when it looks as though it might be needed, but wait until your offer is accepted before you help. Listen to any instructions the person may want to give. Do not insist in helping if the person refuses help, but stay close by and be ready to assist if necessary
- do not take wheelchairs, crutches or other mobility devices away from passengers unless they have indicated that they want them out of the way. It is important that the passenger is settled before moving the mobility device
- when assisting passengers with vision impairment, do not grab them. Identify yourself verbally, and then offer to help. If the person carries a cane in the right hand, you should offer your right arm so he or she may hold it with their left hand. Let the individuals allow you to guide them. Do not rush. Keep the person informed about where you are. Tell your passengers with visual impairments about starts and stops, turns, steps, and any other details of the route. Be sure to let them know when you are leaving them. Do not touch or in any way distract a service dog, unless you have the passenger's permission
- when assisting passengers with a hearing impairment, you should gesture with your hand or touch them lightly to get their attention. Look directly at the person when you are speaking, because some hearing impaired people need to see your mouth to lip-read. Speak slowly, clearly, and

expressively. Speaking loudly may help some, but not all; keep their privacy in mind. Remember that many people with hearing impairment also do not speak. Sometimes writing things down on paper is the best solution. Remember to carry a pen and paper with you for this purpose

- when giving assistance to a person with a disability, take into account conditions such as rain, ice, wind, inclines, steps, gravel, mud, etc.

PASSENGER COMFORT

Passenger comfort must be uppermost in the minds of operators who transport persons with disabilities. A draft, for example, or a hot vehicle on a summer's day can have major effects on some passengers with disabilities. Always be alert and sensitive to the environmental conditions that can affect your passenger's comfort. Check occasionally and ask if your passengers are comfortable. Here are some tips to get you started:

- knowing and understanding the characteristics of a disability is valuable information for operators
- watch the temperature. Make it your business to know where the warmer and colder spots are in the vehicle when the heater or air conditioner is on, the location of any drafts, and where the drafts go when the door is opened. Inform passengers of the warm and cool spots to help them decide where to be seated. The rear of the vehicle is usually much warmer than the front, although this area can be rougher for passengers in wheelchairs. Use weather stripping to cut down on the drafts
- keep the season in mind. In the winter, open the bus doors only when necessary

- maintain good air quality. With ‘rear loaders’, it is a good idea to shut off the engine at pick-up and drop-off points to keep hazardous and irritating gases out of the bus. The engines of side loaders do not necessarily have to be turned off as the exhaust vents on the side of the bus are away from the door.

In winter-time, batteries can be depleted if you do not leave the engine running, particularly if the lift operates with the battery as the power source. In all seasons, keep the vehicle well ventilated.

DRIVING TIPS

Your driving patterns can have a major impact on your passengers comfort. Jerky, bumpy rides can create excruciating pain for many passengers and may jeopardize their safety. Here are some tips to keep in mind:

- drive as smoothly as possible, particularly when starting or stopping. Avoid unnecessary or sudden lane changes
- watch those bumps and potholes. Slow down and drive gently over them
- ease around corners slowly and smoothly. People who have difficulties with balance are particularly vulnerable to sudden changes of direction or movement. Some passengers may not have the upper body strength to be able to brace themselves.

LOADING AND UNLOADING LOCATIONS

It is important for the operator to have a plan for suitable stopping locations when driving a bus equipped with a wheelchair lift.

You will need to consider the following:

- where to stop the bus so the wheelchair lift operates properly

- where to stop so that you can be seen by other motorists
- where to stop if your original stop is not available
- know how and when to use the alternately flashing amber and red light system. Review local bylaws, policies and procedures regarding the use of these lights with your supervisor.

EMERGENCY SITUATIONS

Evacuations

Every school bus operator should have an evacuation plan for their school bus as discussed in an earlier session.

It is important for any school bus operator, including those who transport passengers with disabilities or special needs, to know what to do in the event of an emergency.

As in any emergency situation, you must determine whether you will need to evacuate the passengers. You will evacuate the passengers if any of the following exists:

- unsafe position
- danger of fire such as smoke or fuel leaks
- fire

Always remain calm. If your passengers sense fear and anxiety, they may become uncontrollable.

Other helpful information to have on-hand and easily accessible are the location and phone numbers of fire stations, hospitals, police stations, and medical clinics along or close to your route.

Passenger Limitations

Knowing the limitations of your passengers: what the passengers can and cannot do is important for the school bus operator in and emergency situation. The operator should know the following:

- which passengers can come off the bus by themselves
- which passengers can be removed from their wheelchair
- which passengers must not be removed from their wheelchair.

The wheelchairs should be left on the bus if it is faster to remove only the person. If possible, have the able-bodied passengers assist you with passengers who require extra help.

GENERAL LIFTING TECHNIQUES:

When having to lift a person, never try to lift someone who is more than half of your own weight. Look around to see if there is anyone who can assist you in this.

Test your lifting ability by slowly trying to lift the passenger. You do not want to injure yourself, thus rendering yourself unable to assist anyone. If you are unable to lift the passenger, try another method.

Always ensure the aisle is clear to the exit.

Inform the passenger what you are about to do. If necessary, cut the restraints.

Position the passenger in the direction you want to go if possible. Maintain a good grip on the passenger or grip their clothing. Try to squat down, keeping your heels flat to the floor.

Get close to your passenger and gradually lift, using your legs, abdominal, and buttock muscles. Try to keep your back as straight as possible.

TECHNIQUES FOR REMOVING A WHEELCHAIR PASSENGER:

You can use one of the following techniques:

1. the one-person lift
2. the two-person lift
3. the blanket drag

1. The One-Person Lift:

- follow general lifting guidelines
- pass the passenger's closest arm over your shoulder
- place one of your arms behind the passenger's shoulders with your hand under the passenger's other arm
- place your other arm under the passenger's knees
- squat down with feet shoulder-width apart
- lift the passenger with the load equally divided between both arms, holding the passenger close to you.

2. The Two-Person Lift:

- follow general lifting guidelines
- move the passenger in a wheelchair as close to the exit as possible
- slide the passenger on a seat next to the aisle
- the taller person stands behind the passenger and the second person stands in front of the passenger and off to the side
- if the passenger is in a wheelchair, the person in the front should remove the armrests and fold up the footrests
- the person in the back reaches under the passenger's arms and grasps the right hand to passenger's right wrist and left hand to passenger's left wrist. Another way is to clasp hands across the passenger's chest

- the person in the front lifts the lower extremities under the thighs and hips
- squat down and lift together on a count of three
- move to the designated area and lower the passenger on the count of three.

3. Blanket Drag:

Using a blanket will reduce stress on the passengers body and will reduce the chance of injury to your passenger and you. The blanket drag is also a way to move a passenger who too heavy to lift or a passenger who might be hurt by lifting.

This is not a recommended method for a passenger who is medically fragile.

Use the following technique:

- first, follow the general lifting rules
- fold a blanket in half and place it on the floor next to the passenger
- lower the passenger’s legs onto the blanket first, then the body
- place the passenger with their head toward the exit
- wrap the blanket around the passenger to prevent their arms and legs from being caught on obstacles
- grasp the blanket near the passenger’s head and carefully drag the passenger to the exit.

Remember, in all emergency situations, it is not enough for you, the operator, to know what you will need to do in an emergency, but it is equally important for your passengers to know what to do as well.

Always review local policies and procedures with your company and school board before conducting practices.

RESTRAINT CUTTERS

Special restraint cutters allow you to remove tie-down straps or other occupant restraints quickly in an emergency situation. The restraint webbing fits into the slot on the restraint cutter and the razor-sharp blade in the slot cuts the strap.

Store the restraint cutter in a location that is easily accessible for the bus operator yet out of easy reach of the passengers.

With all emergency situations, communicate with all of your passengers as to what is happening.

Note: When practicing evacuation procedures, do not take a passenger out of their wheelchair. While completing these emergency drills, be certain to communicate with the passenger what would happen in the event of a real emergency.

Remember: *You must notify school officials before conducting an evacuation drill.*

LIFT FAILURE

If you experience a power or equipment failure and you have a passenger on the bus, you will have to operate the lift manually. Follow the manufacturer’s instructions for manually operating the wheelchair lift.

MEDICAL CONDITIONS

School districts should make you, the school bus operator, aware of the medical conditions of your passengers. This will aid in the event of an emergency situation.

SERVICE ANIMALS

Some of your passengers may be required to bring along a service animal.

If a passenger needs to be accompanied by a service animal then a permit must be obtained from Alberta Transportation, Vehicle Safety (780)427-8901. For toll-free access outside of Edmonton dial 310-0000.

OXYGEN CONTAINERS

Oxygen containers may be transported on a school bus only in accordance with the federal **Transportation of Dangerous Goods Regulations**, 1.18; Medical Device or Article which has been adopted by the Province of Alberta:

SOR/2001-286

- (i) *the medical device is attached to or implanted in an individual or an animal*
- (ii) *the wheelchair or medical article is in transport and is intended for the personal use of a specific individual, or*
- (iii) *the medical cylinder is intended for the personal use of an individual on board the road vehicle, railway vehicle or ship, is in compliance with Part 5, Means of Containment, and has a water capacity less than, or equal to 5L.*

For more information on these medical devices on a school bus, please call Alberta Transportation, Dangerous Goods and Railway Safety at 1-800-272-9600 or Edmonton (780) 422-9600. For toll-free access outside of Edmonton dial 310-0000.

EXTREME BEHAVIOURAL ISSUES

In transporting passengers with special needs, there may be instances where one of your passengers may become unusually agitated while on the trip to or from school. For the operator, this can be stressful, trying to pay attention to the road and monitoring the passengers at the same time.

The following suggestions could assist you in these situations.

Bus Aides:

By providing a bus aide on a route where a passenger requires more attention can relieve a lot of the stress for the operator by allowing them to concentrate primarily on the driving task.

This option should be discussed with your company and the school board if you are experiencing difficulty with a passenger's behaviour.

Harnesses/Restraints:

There are various types of restraints that can be used to ensure that a passenger with extreme behavioural issues remains safe in their seat. Talk to your company and school board before using any of these restraints.

SERIES 5.2: JUST ASK

REVIEW WORKSHEET

1. The acronym “ASK” stands for:
2. Passenger comfort is an important part of transporting people with disabilities. Name three things the driver should be aware of while driving:
3. When transporting people with disabilities, an operator needs to follow two simple rules. They are:
4. When loading or unloading, you will need to consider the following:
5. Because of limitations, the operator transporting people with disabilities must know the following:

SERIES 5.3: Basic Handling for Mobility Aids

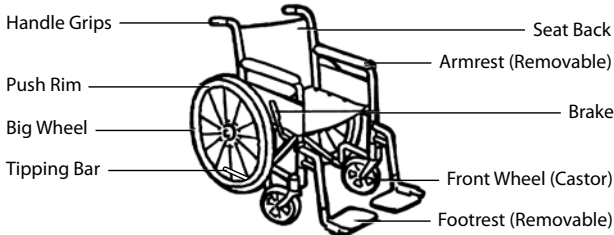
Note: Most of this module refers to the handling of **manual wheelchairs**. You cannot safely tip a power chair or scooter to the balance point since tipping may spill acids from batteries and cause severe burns. DO NOT tip the power chair or scooter more than a few inches unless the batteries have been removed.

Always use common sense. Whenever possible avoid curbs, don't use stairs, and always ask your passengers how to provide assistance.

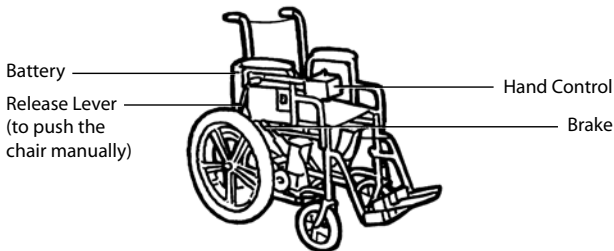
TYPES OF MOBILITY AIDS

The most common types of mobility aids are the standard manual wheelchair, the power drive (motorized) wheelchair, and the motorized scooter.

Standard Wheelchair



Motorized Wheelchair



Motorized Scooter



Be Careful About Back Injuries

Proper lifting techniques are essential to prevent injuries. Remember to follow all the rules to avoid back injuries, including keeping your back straight and using your legs to lift, while keeping the person or object being lifted close to the body.

10 TIPS FOR WHEELCHAIR HANDLING

When handling a wheelchair, always remember to first ask your passengers if they have any questions.

- don't rush. Push at a normal walking speed
- always inform the passengers as to what you are about to do
- look ahead at least three metres (10 feet) and along the sides of the chair
- slow down. Watch for small cracks or bumps, and go around them
- tip the chair over bumps or cracks if they cannot be avoided. Use the tip bar to lower the front wheels with control and don't drop or bang the chair down
- watch out for other people
- judge distances by the front of the foot pedals rather than the front of the seat. Remember that the passenger's feet will extend beyond the footrests
- beware of loose handle grips or armrests that are not properly locked in place
- watch that hands and feet don't get caught in the wheels, on the ground or curbs.
- be careful; don't bang the chair or handle it roughly for the sake of the passenger and the chair

TIPPING A MANUAL WHEELCHAIR TO THE BALANCE POINT

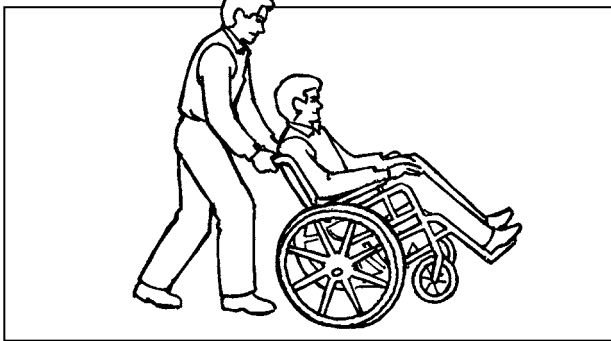
You will have to tip a manual wheelchair backwards to the balance point to clear objects, go up and down curbs, or over rough ground.

The balance point is the point where the chair requires little or no effort to stabilize, and can be easily manoeuvred on just its rear wheels. This point varies according to the weight and height of the passenger, the type and size of the wheelchair, and your size.

Step One:

- stand with one foot in front of the other
- place the front foot on the tip bar. Press down
- pull handle grips toward you and downward
- if the chair does not have push handles or tip bars, ask the owner how to best provide assistance

Step Two:



- continue pulling the handle grips down until the balance point is reached. The weight of the chair should rest in the palms of the hands and the chair should be balanced on its back wheels
- remove foot from tip bar

Step Three:

- to return the chair to all four wheels, carefully and gently reverse the above procedure

BUMPS AND ROUGH GROUND

Bumps:

Cracks, door jambs and even stones can stop the small front wheels of a chair from turning. A sudden, abrupt and unexpected stop can be very uncomfortable for the person in the wheelchair or could even cause them to fall out of the chair.

These situations, when encountered, require you to slightly tilt the wheelchair backwards.

Here's how:

- tip the chair slightly using the tipping bar until the casters are clear of the bumps
- keep your foot on the tip bar and push the chair past the bump
- set the chair down gently
- remember, if the chair does not have pull handles or tip bars, ask the passenger what to do.

Rough Ground:

When you leave a smooth pavement or sidewalk surface, special techniques are needed to prevent the front wheels from digging into soft ground that could result in the person falling out of the wheelchair.

Use the following techniques when crossing uneven ground, grass, mud, snow covered walks or gravel driveways.

Moving Forward:

On fairly level ground:

- tip the chair to the balance point as the big wheels are easier than the small front wheels to manoeuvre or turn on rough ground

- while maintaining the balance point, push the chair forward until you clear the rough ground
- gently return the front wheels to the ground when back on a hard flat surface.

Moving Backwards:

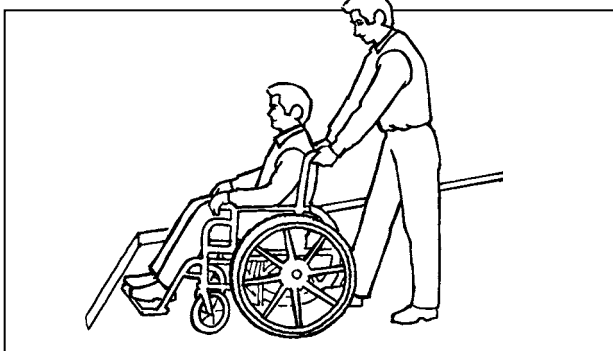
In many cases, it may be easier going backwards on rough terrain. In heavy snow or where pushing is difficult, the small front wheels can dig in, making for a rough ride for your passenger and difficult for you.

- back the chair to the edge of the rough ground and ensure a solid stance
- tilt the chair back to the balance point
- check the ground in the direction of travel and look over your shoulder before moving
- step backwards an arm’s length away from the chair and pull using your leg muscles
- pull the chair towards you
- repeat until the area is cleared
- stop and gently return to all four wheels on the ground.

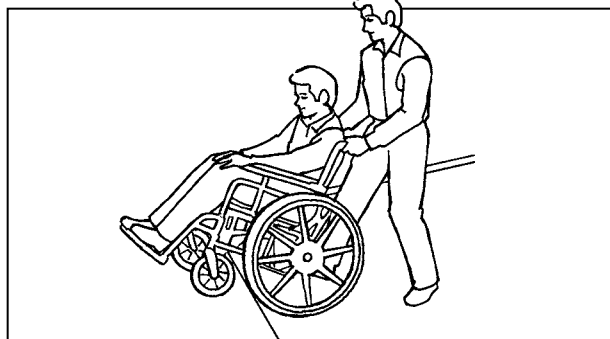
CURBS: (Manual Wheelchairs Only)

Going up and over a curb:

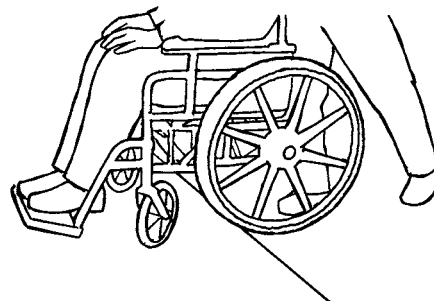
- go up and over curbs frontwards, not backwards



- approach the curb at a 90 degree angle
- tilt the chair to the balance point



- move the chair forward so that the rear wheels touch the curb and the front wheels are on the curb.



- ensure solid stance for stability by placing your feet shoulder-width apart, placing one foot slightly ahead of the other, and bending the knees slightly
- lift-roll the rear wheels up and over the curb

Going Down a Curb:

Reverse the previous procedures, taking care not to allow the rear wheels to drop off the curb edge. Go down backwards, rear wheels first. Note that some passengers feel uncomfortable going down a curb backwards and prefer to face the direction in which they are moving.

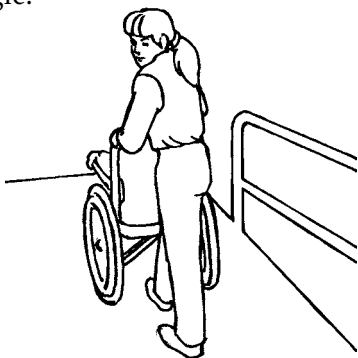
To go down a curb frontwards:

- tip the chair to its balance point
- move to the curb edge and with control, carefully rock the rear wheels down the curb
- move away from the curb and, using the tip bar, gently return to all four wheels.

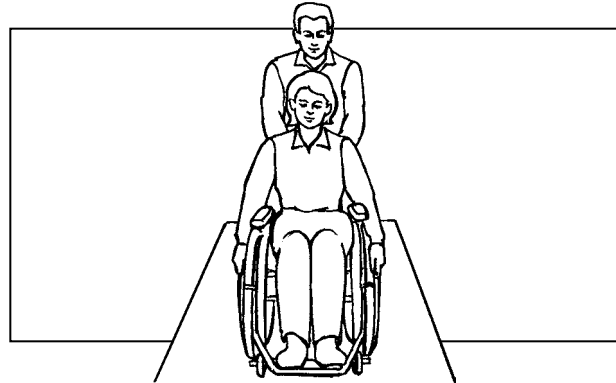
RAMPS

Going Down a Ramp:

- turn the chair backwards, particularly if the ramp is steep or slippery
- align the chair so that the rear wheels are at a 90 degree angle to the top – so that you proceed straight down the ramp and not at an angle.



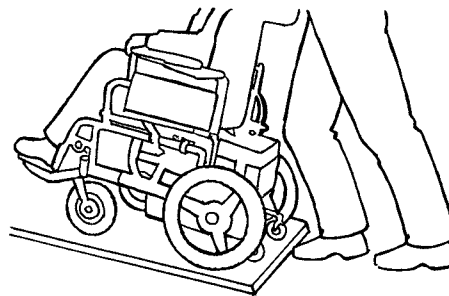
- brace the wheelchair against the thigh of one leg (not the knee).
- place one leg behind the other
- step backwards with your front leg
- allow the chair to rest on the thigh of the front leg
- look over your shoulder to check for obstacles, or slippery areas
- steer the chair straight down until you reach the bottom
- when the bottom is reached, use the procedure for going over bumps discussed previously to ensure the footrests do not scrape on the ramp.



Note: You can also go down a ramp with your passenger facing downhill under certain circumstances. If, for example, the ramp has a gentle grade, the ramp surface is not slippery or slatted, and the weather is clear and dry, you might consider this method. Make sure the handgrips are secure on the chair before you do this.

Going Up a Ramp:

- keep the chair upright on all four wheels
- push the chair forward
- be careful of wet or slippery areas



- use the 'bump' procedure previously mentioned to ensure that the footrests do not run into the base of the ramp.

STAIRS: (Manual Wheelchairs Only)

Wherever possible, use two people to take a person using a wheelchair up or down stairs. Doing it yourself is difficult and dangerous. It puts you and your passenger at risk.

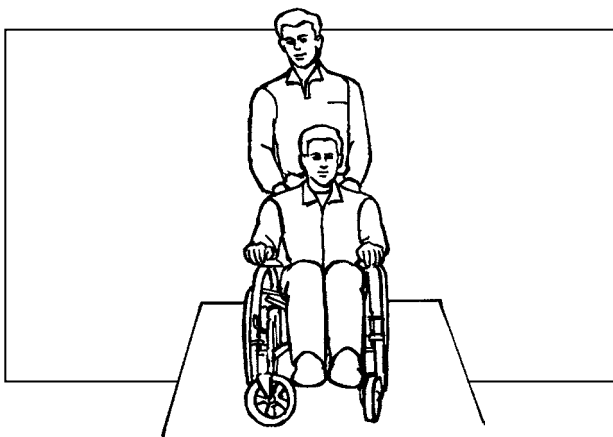
If your passenger has a lap belt, make sure it is secured at all times when moving the wheelchair.

Safety Tips:

- make sure the handle grips are secure. If they are loose, remove them
- never grasp removable parts such as armrests or footrests
- always assume a solid stance when lifting to stabilize your weight
- preferably use two people to do the job and make sure they have good communication among themselves
- make sure the passenger is properly positioned in the chair, with feet securely on the foot rests and hands and arms away from the wheels
- NEVER go beyond your physical limitations.

One Person Method: (Not Preferred)

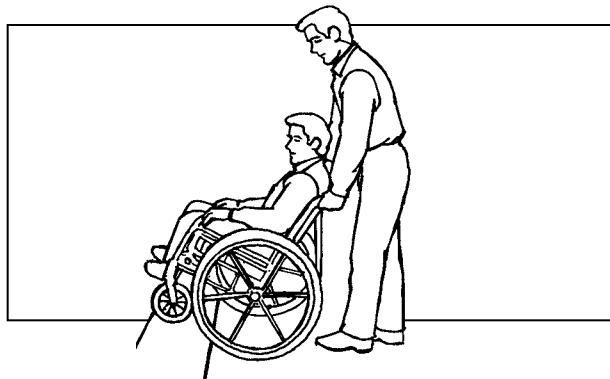
Going Down Stairs:



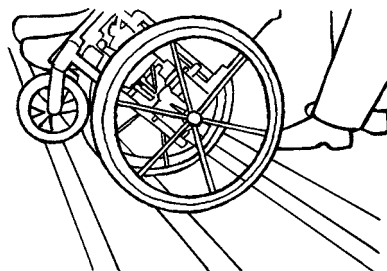
- remember it is always safer to use two people to take a person using a wheelchair down stairs.

Most of the same procedures apply whether one or two people negotiate the stairs

- have the person using the wheelchair face downstairs
- stop the wheelchair well before reaching the first step
- tilt the chair to the balance point

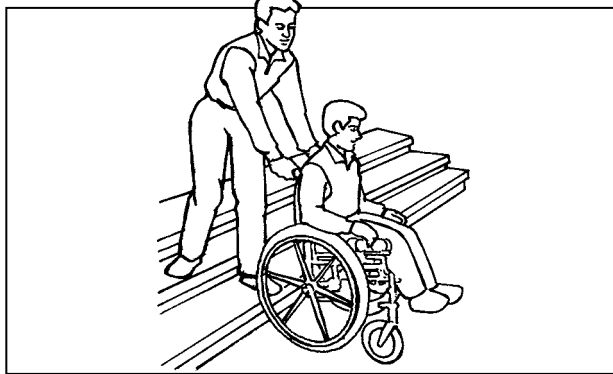


- roll the chair forward to the edge of the step
- ensure the wheels are square with the edge
- assume a solid stance
- roll the rear wheels only over the edge of the step



- use your body weight to hold the chair back
- rest the big wheels in the 'V' of the step before rolling over the next step edge (refer to picture above)

- move one foot to the step that the chair is on
- leave your other foot one step above
- repeat



- assume a solid stance (bended knees, keep back straight)

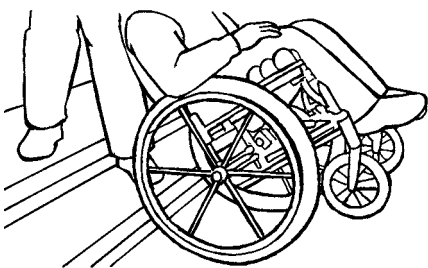


- when the bottom is reached, gently return the chair to the upright position

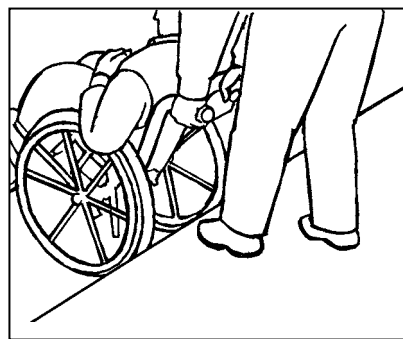
Going Up Stairs

Remember, it is always safer to use two people to take a person using a wheelchair up or down stairs.

- back the wheelchair towards the first step and tip the chair to the balance point



- pull on the handle grips and lean backwards
- straighten your legs and bend your arms slightly as the big wheels come over the edge of the step
- pull the big wheels into the 'V' of the step
- change footing and repeat



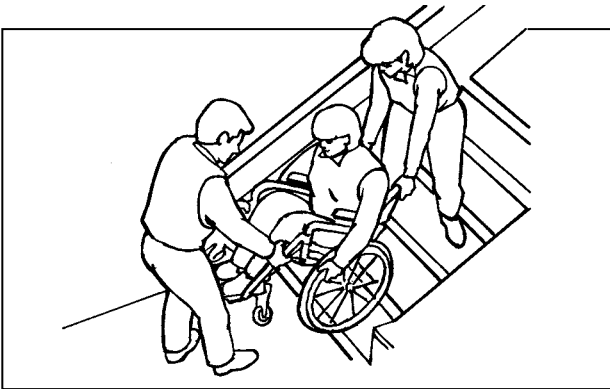
- with the big wheels touching the bottom step, place one foot on the first step and the other on the next step above
- the dominant leg should be on the higher step

- once at the top, move the chair well away from the edge
- gently return the chair to the upright position.

Two-Person Method: (Preferred)

Going Down Stairs

Follow the same procedures as for going up and down stairs with one attendant. (With the person using the wheelchair facing down the stairs, tilt the chair to the balance point and move to the edge of the first step.)



Upper Attendant:

- lowers the chair from step to step, using procedures listed in the one-person method
- gives verbal commands such as: “one, two, and three, lower” to synchronize the movement.

Lower Attendant:

- does not lift, but maintains control or pushes so weight isn’t shifted to the upper attendant. If the lower attendant tries to help by lifting the front of the wheelchair, it puts the person holding the hand grips at risk by throwing off their balance
- grasps the lower part of the wheelchair frame, not the moveable or removable parts
- maintains the balance point of the chair
- holds the chair in the ‘V’ of the step while the upper attendant changes footing

Going Up Stairs

Upper Attendant:

- the strongest person assumes the back position
- on a verbal command issued by the upper person, both attendants together lift-roll the wheelchair upward one step at a time
- the upper attendant has better leverage, and should do most of the pulling
- lifting too much from the front can cause a loss of balance

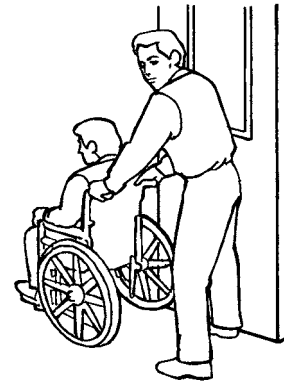
Lower Attendant:

- follows the steps listed in Going Down Stairs.

DOORS

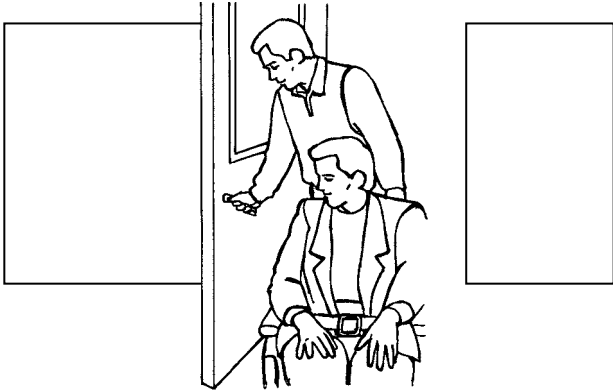
Doors Opening Outward:

- turn chair around and back through doorway and ensure the passenger’s feet clear the doorway

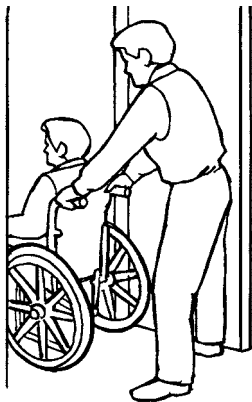


- prop the door with your foot or elbow, or carry a door-stop for this purpose. You can also ask a passerby to hold the door for you
- turn chair around to forward position and push clear of the area, again ensuring the passenger’s feet are clear the doorway
- release the door.

Doors Opening Inward:



- place wheelchair at an angle slightly away from where the door will open
- hold chair with one hand and open door with the other.
- use foot or elbow to hold the door open
- push the chair through the doorway and release the door.



SERIES 5.3: BASIC HANDLING FOR MOBILITY AIDS**REVIEW WORKSHEET**

1. When going down a ramp, the passenger should face _____ the ramp.
2. When going down stairs, the strongest person should assume the _____ position.
3. When should the driver tip a wheelchair to its balance point?
4. What are the three most common types of mobility aids?
5. When handling a wheelchair, the operator needs to look ahead _____ metres.
6. The three techniques for removing a wheelchair student are:
7. _____ allow you to remove tie-down straps or other restraints quickly in an emergency situation.

SERIES 5.4: Loading and Unloading

One of the secrets behind the safe loading and unloading of your passengers is to plan ahead. You can make life easier for your passengers, yourself and other road users by thinking ahead and positioning your vehicle properly.

POSITIONING OF VEHICLE:

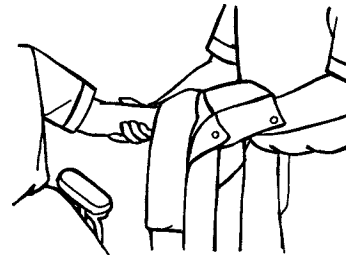
- avoid congested areas if practical
- preferably look for a drive-through route where you can drive in and out without backing up
- try to stop where other drivers have a good view of your vehicle and what you doing
- avoid stopping where passengers will have to be taken down curbs, rough areas, snow banks, puddles, etc.
- always turn the ignition off and remove the keys if the vehicle is to be left unattended.

Note: *In cold weather, some buses will not restart if this procedure is followed. Some buses are equipped with a 'kill-switch' that allows the operator to leave the vehicle running after removing the key. This allows the heat to remain on for the safety and comfort of passengers. If someone tries to take the vehicle, it will stall when put into gear and cannot be restarted then without the key.*

- avoid getting too close to other parked vehicles
- leave room for the ramp/lift
- leave room to manoeuvre the mobility aid on or off the ramp/lift
- stop as close as practical to the pick-up/drop-off area.

HELPING WITH COATS:

Helping with coats and other personal services are not part of the job description for all school bus operators who transport passengers with disabilities. Check your company's policy on this subject, talk to your supervisor, and always use your own judgment and common sense.



When helping with coats:

- thread your left arm through the left sleeve of the passenger's coat.
- Note:** *the starting arm may vary depending on the passenger's mobility of either arm*
- take your passenger's left arm and gently pull the sleeve up to the shoulder



- lean the passenger forward, support at the front with your arm, and pull the coat around the passenger's back
- pull the excess material to opposite arm



- leave the coat off the shoulders, and repeat the first two steps for the passenger's right sleeve
- pull the coat up over the shoulders, and adjust it to make sure it looks smooth and neat.

Note: An alternate method is to place the jacket in the passenger's lap, facing outward with the collar on top. Thread the passenger's arms through the sleeves and gently take the jacket over the passenger's head and adjust as necessary. This method is not recommended for passengers who cannot raise their arms.

ASSISTING AMBULATORY PASSENGERS:

Some of your passenger passengers may be able to walk on their own or may require a cane or walker for support.

To help these passengers, remember the ASK rule: ASK if and how they might need assistance, but wait until your offer is accepted before you help.

Touching a passenger unannounced can throw them off balance and lead to a fall.

It is particularly important to ASK passengers with walkers how you can help before they reach the point when they must leave their walkers behind to board the school bus.

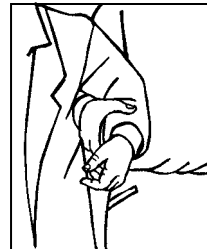
If a passenger wants assistance, ASK specifically how you may help. If the passenger refuses help, stay close by and be prepared just in case.

The following procedures are recommended to assist an ambulatory passenger:

- offer your arm to passengers with visual impairments, or passengers who need some support
- your passenger should grasp your arm just above the elbow



- your role is to act as a guide. Always walk slightly ahead of your passenger, and agree on a comfortable pace



- for passengers who require more support, hold your forearm at a 90 degree angle to your upper arm
- the passenger then puts his or her forearm inside your arm for extra support.

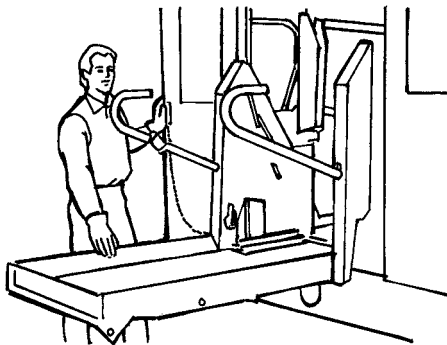
Note: If a passenger is about to fall, do everything you can to cushion the fall, but normally don't try to prevent it. Attempting to stop a fall could result in injuries for both you and the passenger.

LOADING USING A LIFT:

To help passengers on and off a vehicle using a lift requires common sense and knowledge of your vehicle’s entry system. The safest method of using a lift varies with the type of equipment, the size of the mobility aid, etc. Side loading lifts require the passenger to face away from the vehicle. Rear loading lift systems require the passenger to face the vehicle.

The following procedure is recommended for both types of lifts:

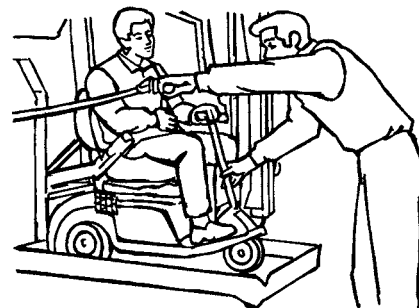
- apply parking brake
- check to ensure that the passenger in the chair has done up their lap belt
- make sure the doors are locked open and cannot swing closed



- lower lift to ground level, being careful not to pound it into the ground or leave it resting on uneven ground
- place the mobility aid on the lift, with the passenger facing away from the vehicle, making sure that the passenger’s feet and legs or parts of the mobility aid will not get caught between the vehicle and the lift
- put on the mobility aid’s brakes, if available
- put up the safety plate on the lift (on some vehicles, this is done automatically)



- operators should ride on the lift with the passenger when possible, but some scooters and electric chairs are too big to allow this. Operators must keep one hand on the mobility aid to ensure they are immediately aware of any movement of the chair while on the lift
- release the brakes of the mobility aid
- roll the mobility aid into the vehicle and apply it’s brakes
- enter the vehicle and manoeuvre the mobility aid to the desired location, ensuring the passenger’s feet are clear
- use tie-downs, seat belts, shoulder straps and mobility aid brakes
- don’t forget to return the lift to the upright position and ensure the doors are closed before re-entering the vehicle
- develop a routine. If distracted, return to the routine to ensure no steps are missed or are incomplete



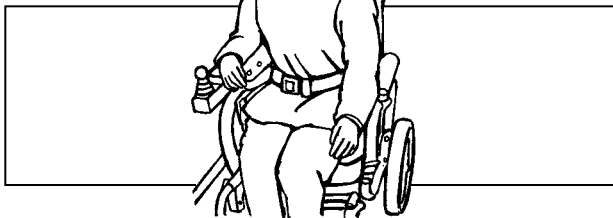
Follow the same procedures for all mobility aids, making sure the safety plate is up before you start the lift (if it does not go up automatically), and remembering to keep one hand on the mobility aid at all times.

UNLOADING USING A LIFT:

To unload, reverse the procedures in Loading Using a Lift.

MOBILITY AID AND PASSENGER RESTRAINT SYSTEMS:

Securing Wheelchairs and Passengers:

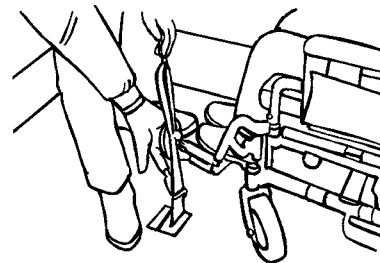


- make sure your passengers have their chair's lap belt (if equipped) properly secured
- centre the chair on the four plates on the floor of the bus

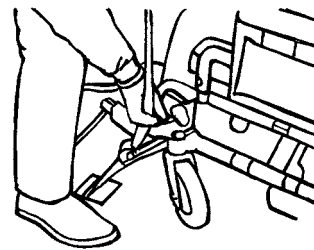


- if passengers prefer to use a lap belt attached to the vehicle, take the belt and attach it to one of the rear tie-downs. Pass it around the passenger, holding it away from the passenger's body. Take the other end and secure it to the other rear tie-down

- when using a shoulder strap, be sensitive to your passenger and be as unobtrusive as possible
- take the shoulder strap from the wall, holding it away from your passenger's body with one hand. While still holding the strap, use your other hand to clip it to the four point tie down on the mobility aid
- gently release the shoulder strap and pull the adjustment snugly

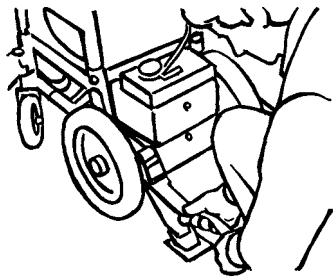


- secure the two front tie-downs. Attach the clip into the floor plate and pull the belt to the estimated length required to secure the hook
- attach the hook to a solid frame member on the wheelchair



- tighten the belt so it is secure but not forced and make sure the belt forms a 45-degree angle to the floor
- over-tightening may damage the wheelchair

- keep the belts clean and off the floor by securing the Velcro tabs
- repeat the procedure with the rear belts, again having the belts form a 45-degree angle to the floor
- for manual wheel chairs, hook the belt to a solid frame member near the place where the chair seat meets the seat back



- when tied down, the wheel chair should be snug and not wiggle back and forth, but be careful not to over-tighten.

Securing Scooters:

Three or four-wheel scooters can be a challenge to secure, particularly if there are no clips or rings attached to the rear framework. Some companies will not transport scooters unless they can be properly secured.

Passengers are advised to contact the scooter manufacturer to make any adjustments and not leave the job to amateurs. Otherwise, the scooter can sustain damage and the safety of all passengers can be compromised.

The Safest Way:

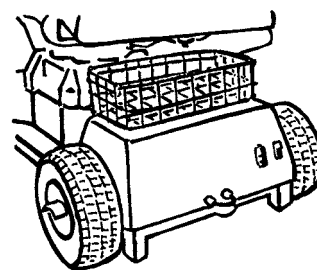
The safest way to travel with a passenger who uses a scooter is to have the passenger transfer to a seat and use a lap belt and shoulder strap. Some companies make this practice a requirement.

If passengers are reluctant to leave their scooter, the best procedure is to appeal to their reason, emphasizing that this is for their safety and the safety of everyone else on the bus:

- explain to passengers that it is extremely dangerous for everyone in the vehicle if they remain on their scooters
- mention that they can easily tip when the bus is going around corners because their center of gravity is high, and this potentially puts all passengers at risk

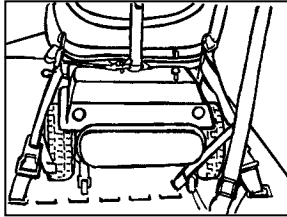
Some passengers may be unable to transfer from their scooters. In these cases, or when the passenger refuses to leave their scooter, it should be secured as described below. The passenger should be secured with a lap belt and shoulder strap.

Secure scooters using the same procedures for wheelchairs. Tie them down using the four-point system in the floor, tightening the straps so the straps are snug but not too tight.



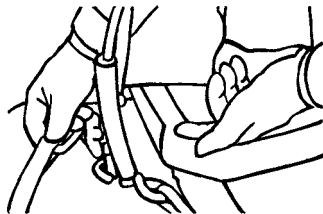
Scooters should be equipped with clips, bars or D-rings installed by the manufacturer on the rear framework.

The safest way to secure the back of the scooter is by looping the belts through the clip, ring or bar attached to the rear framework. The belts should form 45-degree angles to the floor.



Less safe and less secure methods of tying down the back of the scooter are by attaching the clips around the pedestal or the chair frame.

Note: *There is a danger that the pedestal and frame can detach during a collision.*



Secure the front of the scooter by hooking each belt to the tiller and crisscrossing them in front.

Attach the belts to the two floor plates and adjust.

SERIES 5.4: LOADING AND UNLOADING

REVIEW WORKSHEET

1. If a student is about to fall, do everything you can to _____ the fall, but don't try to _____ it.
2. Outline the steps an operator must take to use a side-loading or rear-loading lift system.
3. Tie-down belts should form a _____ degree angle to the floor.

SERIES 5.5: Child Safety Seats

The leading cause of death and injury to children under the age of 15 in Alberta is from motor vehicle collisions. In a typical year, approximately 35 children are killed and 1,900 are seriously injured at a staggering emotional and financial cost to society.

LEGAL REQUIREMENTS

In Alberta the law requires that all children under six years of age and weighing 18 kg (40 lbs) or less must be properly secured in an approved child safety seat while travelling in a motor vehicle. There are some exemptions to this law such as taxis, emergency vehicles, and vehicles that were not originally equipped with seat belts.

If the school bus is equipped with seat belts then drivers are legally responsible to ensure that all passengers under the age of 16 years are correctly restrained by either child safety seats or the vehicle seat belts. Passengers 16 years of age or older are themselves legally responsible for using any available seat belts.

The child safety seat must meet the Canada Motor Vehicle Safety Standard (CMVSS) 213 and must have a label stating the seat meets these CMVSS requirements and give instructions on how to use and install the seat.

The requirements are:

- **CMVSS 213** - Child Restraint Systems for children 9 to 22 kg (20-48 lb)
- **CMVSS 213.1** - Infant Restraint Systems For children 2.2 kg up to 10 kg (5 to 22 lb)
- **CMVSS 213.2** - Booster Cushions for children weighing more than 18 kg (40 lb)
- **CMVSS 213.3** - Restraint Systems for Disabled Persons

- **CMVSS 213.4** - Built-in Child Restraint Systems
- **CMVSS 213.5** - Infants With Special Needs

TYPES OF CHILD SAFETY SEATS:

There are many different makes and models of child safety seats, but these seats fall into three basic categories. These seats may be a combination of more than one of the Canada Motor Vehicle Safety Standards (CMVSS) previously mentioned.

Rear Facing:



Always follow the manufacturer's instructions for use and installation.

A rear facing child safety seat is used correctly if:

- it is facing the rear of the vehicle.
- vehicle seat belt or UAS/LATCH is routed correctly.
- it is not used in a position where there is a passenger front-seat air bag.
- locking clip is used correctly when required.
- chest clip is level with the child's armpits.
- internal harness is used according to the manufacturer's instructions.
- internal harness should be even or slightly below the height of the child's shoulder.
- internal harness is snug. One finger should fit between the child's collar bone and internal harness.

Forward Facing:



Always follow manufacturer's instructions for use and installation.

A forward facing child safety seat is used correctly if:

- it is facing forward and in the upright position.
- vehicle seat belt or UAS/LATCH is routed correctly through the proper guides behind the child safety seat.
- locking clip is used correctly when required.
- tether strap is hooked to the proper tether anchor located in the vehicle.
- chest clip is level with the child's armpits.
- internal harness is used according to the manufacturer's instructions.
- internal harness is snug. One finger should fit between the child's collar bone and internal harness.
- internal harness should be routed according to the manufacturer's instructions.

Combination:



The combination of a forward facing child safety seat and a booster seat offers a wide weight range of 9 kg to over 18 kg (20 lb to over 40 lb).

This system includes a five point harness and tether. The internal harness should be even or above the height of the child's shoulders.

When a child's weight exceeds 18 kg (40 lb.), you can remove the internal harness system and use the seat as a high-back booster seat, as instructed by the manufacturer.

Booster Seats:



It is recommended that all child passengers under nine years of age who weigh less than 37 kg (80 lb) should be in an approved and properly used booster seat while travelling in a motor vehicle.

Belt Positioning Booster Seats help position the seat belt properly on a child's body. The shoulder belt should lie across the middle of the child's chest and the lap portion of the belt should touch the hips.

A **simple booster seat** is used correctly if the lap belt position fits low across the hips and the shoulder belt is positioned across the chest.

A **high back booster seat** is used correctly if it is used **only** with a lap/shoulder belt.

A **shield booster seat** is used correctly if the lap belt is secured over the shield.

If you choose to use just the vehicle seat belt system instead of a booster seat, make sure it is worn the way it is designed to be used. The shoulder belt must be in front of the child, never behind the child or under the arm. The lap belt must be low over the hips.

For more information, contact Alberta Transportation at (780) 427-8901. For toll-free access outside of Edmonton dial 310-0000.

SERIES 5.5: CHILD SAFETY SEATS**REVIEW WORKSHEET**

1. In Alberta the law requires that children under the age of _____ years or weighing _____ must be properly secured in a approved child safety seat while travelling in a motor vehicle.
2. What is the national standard that child seats in Canada must meet?

SERIES 5 – GLOSSARY OF TERMS

Term	Definition
Accessible Transportation	– motor vehicles, other than passenger cars, designed and manufactured, or converted, and equipped for the purpose of transporting persons with physical disabilities
Ambulatory Disabled Passengers	– passengers who may require the use of a mobility assistive device such as a cane, walker or similar aid
Attendant (ride-along)	– assistant to the operator of a Special Needs bus
Mobility Aid	– device used to facilitate the transport, in a seated position, of a person with a disability – examples include manual and powered wheelchairs and scooters
Person with a Physical Disability	– a person who, because of a mobility impairment, requires the use of accessible transportation
Special Needs Busing (special education, Sp. Ed.)	– door-to-door transportation provided for persons who cannot use conventional school bus transportation due to a disability
Wheelchair Lift (wheelchair ramp)	– device used for loading/unloading passengers on to or off the bus
Wheelchair Strap (tie down strap)	– a device used to secure a mobility aid while being transported in a bus

Types of School Buses



TYPE C - CONVENTIONAL



TYPE D - FORWARD CONTROL

GRAPHICS DEVELOPED BY: SOUTHLAND TRANSPORTATION LTD

