Saskatchewan Professional Driver's Handbook

2009

A guide for the professional driver

This handbook is a study guide for both beginning and experienced drivers. It contains information about driver's licence qualifications, how to be a safe driver and many other important subjects that will assist you in passing your tests. If you have been driving for many years, it will remind you of your responsibilities as a professional driver and provide you with new laws and changes to previous legislation.

References are made to portions of Saskatchewan's motor vehicle laws, but it is not a complete digest of the various Acts and regulations, and may not be used as the basis for any legal claim or action. Remember, laws, policies and procedures change from time to time. It is your responsibility to keep up to date with these changes.

The professional driver should consult the official statutes for the interpretation and applications of the law.

Copies of various Acts and regulations can, for a fee, be obtained from:

Office of the Queen's Printer
Walter Scott Building
B19-3085 Albert St.
Regina Sask.
S4S 0B1
Telephone: (306) 787-6894

They are also available on the Queen's Printer website at www.qp.gov.sk.ca.

Please remember that if you're thinking of becoming a truck driver, you must now pre-qualify in order to obtain commercial driving privileges. For more information, please see page 13.

Before heading out on the road – read this!

Potential drivers should be aware that specific circumstances such as your personal driving record or a medical condition may prevent you from securing employment in the transportation industry even if you meet all requirements.

In extreme cases, you may be denied insurance or your employer will have to pay substantial surcharges to employ you.

Before incurring the expense of medical, written and road tests as well as possible training, you should take the following self check.

Self Check

☐ Yes or ☐ No Do you have more than three moving traffic violations/at-fault collisions combined in the three years preceding the date of hire?

☐ Yes or ☐ No Do you have a Criminal Code conviction in the three years preceding the date of hire?

If you answered "yes" to one or both questions, SGI recommends that you check with your potential employer and/or insurance broker about how your record will affect your ability to gain employment.

☐ Yes or ☐ No Has your medical report been completed and approved by SGI?

If you answered "no" to this question, you will be unable to start testing for a higher class of licence.

Note: If you have a Criminal Code conviction or certain medical condition(s), you may not be able to travel to the United States, making it that much more difficult to secure employment.

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1. Saskatchewan's classified driver's licence program

The classified driver's licence program establishes minimum standards of skill, knowledge and physical and mental fitness for the operation of each class of vehicle. You must be licensed according to the class of vehicle you will be operating.

When you apply for a Saskatchewan driver's licence, you must complete the prescribed examinations if:

- you have never been licensed as a driver; or
- you have not held a Saskatchewan driver's licence of the class for which you are applying within five years of the date of application; or
- you hold a current licence from any state or country which is not honoured in Saskatchewan; or
- you wish to change to a higher class of licence or to obtain an endorsement; or
- your licence is not current and valid.

You will be considered a novice driver if you are the holder of either a:

- Class 7 driver's licence;
- Class 5 driver's licence with a novice 1 or novice 2 restriction noted on the driver's licence; or
- licence issued by another jurisdiction that is equivalent to a driver's licence described in either clause above.

Novice drivers may not obtain a Class 1, 2, 3, 4 or school bus licence or endorsement or a heavy trailer endorsement.

Note: Not being paid to drive or not owning the vehicle you are driving **does not exempt** you from holding the appropriate class of driver's licence for the class of vehicle you will be operating.

Class 1 licence

A Class 1 licence allows the licence holder to operate:

- Class 1 vehicles – that is, power units and semi-trailers
- Motor vehicles towing a trailer(s) or vehicle(s) where the gross weight of the towed unit(s) exceeds 4,600 kg (10,000 lbs.), (see restrictions – page 12)
- Buses (other than school buses) while towing a vehicle or vehicles where the gross weight of the towed unit(s) exceeds 4,600 kg (10,000 lbs.)
- Motor vehicles in Classes 2, 3, 4 (taxi with Certificate of Approval) and 5

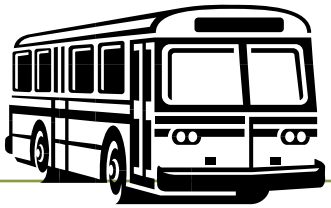
Not permitted to operate:

- Vehicles with air brakes, motorcycles or school buses without appropriate endorsement(s). (See Learners “1,” “2,” “3,” “4” – page 10.)

Requirements for Class 1 licence:

- Minimum age: 18 years and not a novice driver
- Must meet approved medical standards (see page 13)
- Medical certificate required on initial application and/or when requested
- Must meet approved vision standards
- Must complete written tests for Class 1 vehicles. Study materials include the *Saskatchewan Driver’s Handbook* and this handbook
- Must complete a circle check (see page 51)
- Must take road test in Class 1 vehicle – a power-unit and semi-trailer (see restrictions – page 12)

Class 2 licence



A Class 2 licence allows the licence holder to operate:

- Class 2 vehicles – that is, buses (other than school buses) with a seating capacity in excess of 24 adult passengers*, while carrying a passenger or passengers
- Motor vehicles in Classes 3, 4 (taxi with Certificate of Approval) and 5

Not permitted to operate:

- Vehicles with air brakes, motorcycles or school buses without appropriate endorsement(s)
- Class 1 vehicles (except as a learner with an endorsement 1). (See Learners "1," "2," "3," "4" – page 10)

Requirements for Class 2 licence:

- Minimum age: 18 years and not a novice driver
- Must meet approved medical standards (see page 13)
- Medical certificate required on initial application and/or when requested
- Must meet approved vision standards
- Must complete written tests for Class 2 vehicles. Study materials include the *Saskatchewan Driver's Handbook* and this handbook
- Must complete a circle check (see page 51)
- Must take road test in Class 2 vehicle – a bus with a seating capacity for more than 24 adult passengers (a school bus with rated seating capacity for at least 42 or 48 passengers) (see restrictions – page 12)

* **"passenger"** does not include:

- the driver of the vehicle
- a mechanic who is present for the purpose of testing or inspecting the vehicle
- a driver examiner
- if the driver of a vehicle is a learner, a person licensed to drive the vehicle who is present for the purpose of supervising the learner

Class 3 licence

A Class 3 licence allows the licence holder to operate:

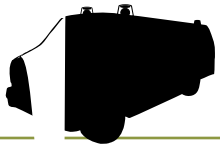
- Class 3 vehicles – that is, trucks with more than two axles, or trucks with more than two axles when towing a trailer(s) or vehicle(s), where the gross weight of the towed unit(s) does not exceed 4,600 kg (10,000 lbs.) and power units with more than two axles when not towing a semi-trailer
- Motor vehicles in Classes 4 (taxi with Certificate of Approval) and 5

Not permitted to operate:

- Vehicles with air brakes, motorcycles or school buses without appropriate endorsement(s)
- Class 1 vehicles (except as a learner with a learner endorsement 1)
- Class 2 vehicles (except as a learner with a learner endorsement 1 or 2). (See Learners “1,” “2,” “3,” “4” – page 10)

Requirements for Class 3 licence:

- Minimum age: 18 years and not a novice driver
- Must meet approved medical standards (see page 13)
- Medical certificate required on initial application and/or when requested
- Must meet approved vision standards
- Must complete written tests for Class 3 vehicles. Study materials include the *Saskatchewan Driver’s Handbook* and this handbook
- Must complete a circle check (see page 51)
- Must take road test in Class 3 vehicle – a truck with three or more axles (see restrictions – page 12)



Class 5 licence

A Class 5 licence allows the licence holder to operate:

- Class 5 vehicles – that is, cars, vans [with maximum seating capacity of not more than 15 passengers* while carrying passenger(s)*, two-axle trucks, two-axle vehicles towing trailer(s) or vehicle(s) where the gross weight of the towed unit(s) does not exceed 4,600 kg (10,000 lbs.), buses when not transporting passengers*, three-axle motor homes, taxis and ambulances (when not used for hire), law enforcement vehicles
- Trucks with two axles registered as farm vehicles when towing any vehicle (does not include power unit/semi-trailer)
- Trucks with more than two axles (registered farm vehicle only), towing trailers or vehicles which do not have gross weight in excess of 4,600 kg (10,000 lbs.) (does not include power unit/semi-trailer)
- School buses when not carrying a passenger or passengers*
- Vehicles registered in Class PB or PC pursuant to *The Vehicle Classification and Registration Regulations* when used exclusively to transport passengers with a disability and any attendants to those passengers (maximum 24 passengers)

Not permitted to operate:

- Vehicles with air brakes, motorcycles and school buses without appropriate endorsement(s)
- Class 1 vehicles (except as a learner with a learner endorsement 1)
- Class 2 vehicles (except as a learner with a learner endorsement 1 or 2)
- Class 3 vehicles (except as a learner with a learner endorsement 1, 2 or 3)
- Class 4 vehicles (except as a learner with a learner endorsement 1, 2, 3 or 4)

Note: Persons with Class 5 licences operating Class 3 or 5 vehicles (registered farm vehicle only) with air brakes are not required to have the air brake endorsement.

Persons with a Class 5 licence applying for a school bus endorsement must be at least 18 years of age and not a novice driver.

Persons with a Class 5 licence carrying 12 or more passengers in a van must be at least 18 years of age.

Requirements for Class 5 licence:

- Minimum age: 16 years, with parental approval
- If first licence, must have held a Class 7 (learner's) licence for at least nine months
- Complete a driver education course approved by the administrator
- Applicants may be requested to submit a medical certificate.
- Must meet basic approved vision standards
- Must complete written tests for Class 5 vehicles. Study materials include the *Saskatchewan Driver's Handbook*
- Must take road test in Class 5 vehicle – a two-axle truck, van or car

*See "passenger" definition p. 3

Class 7 licence

A Class 7 licence allows the licence holder to operate:

- Class 5 vehicles as a learner
- Class 6 vehicles under certain circumstances when the licence is endorsed as a Class 6 learner (see *Saskatchewan Driver's Handbook*)

Not permitted to operate:

- Class 1, 2, 3 or 4 vehicles
- Motorcycles without an endorsement "6" (must be 16 years of age)

Requirements for Class 7 Licence:

- Minimum age: 16 years with parental approval or 15 years with parental approval and high school driver training (see note below)
- Applicant may be requested to submit a medical certificate
- Must meet approved vision standards
- Must complete written or oral tests for Class 7 vehicles. Study materials include the *Saskatchewan Driver's Handbook*
- No road test required

Note: A Class 7 licence may be issued to an applicant who is 15 years old and is enrolled in the High School Driver Education Program under the direction of the Saskatchewan Ministry of Education. The licence is valid only when the holder is accompanied by a person who holds and has held a valid driver's licence for at least a Class 5 vehicle for 365 days within the last three years; must occupy the seat next to the driver and must, at all times, be capable of lawfully assuming operation of the vehicle. The accompanying driver may not be a novice driver. The course instructor may also accompany the applicant.

The licence of any 15-year-old person who discontinues the High School Driver Education Program will be cancelled.

Towing heavy trailers

In recent years, some travel and utility trailers have increased in size to a point where they qualify as Class 1 units. Legislation requires a person to hold a Class 1 licence or a Class 2, 3, 4 or 5 licence with a heavy trailer endorsement to pull utility or recreation trailers weighing in excess of 4,600 kg (trailer and load). Drivers towing heavy trailers must be at least 18 and not a novice driver.

How is the 4,600 kg (10,000 lbs) determined?
The 4,600 kg is determined by weighing the trailer and its contents, and not the tow vehicle. If a driver is pulling two trailers, a camper and a boat for example, the weight of both added together will determine the class of licence required.

Do I need to submit a satisfactory medical report?
Yes. All holders of Class 1 to 4 licences or a Class 5 with a heavy trailer endorsement, must submit a satisfactory medical report upon application and on a periodic basis after that.

Do I need a Class 1 licence or heavy trailer endorsement if the trailer is being pulled behind a farm truck?
No. A trailer of any weight may be towed behind a two axle farm ("F" plated) truck on a Class 5 licence as long as it is a truck and not power unit.

What tests must I complete?
You must complete three written tests and two practical tests.

The following written tests are multiple choice and there is a $10 charge per sitting:

- Basic Class 5 – 20 questions
- Sign test – 25 questions
- Heavy trailer – 20 questions

Practical tests ($40)

- Pre-trip inspection (circle check)
- Road test in the unit (trailer must weigh 10,000 lbs/4,600 kg)

What kind of licence will I receive?
Completion of the required tests will add a heavy trailer endorsement to your Class 2, 3, 4 or 5 licence.

What if I only want learner's privileges?
Drivers who wish to drive only when accompanied by a driver with a Class 1 licence or a heavy trailer endorsement may obtain learner's privileges by completing only the medical and written portions of the testing.

Can I obtain learner's privileges for all Class 1 vehicles?
Yes. However, you would need to pass all seven written tests for a Class 1 with air brakes and not just the three listed above. If the road test is completed with your truck and heavy trailer, you would have a Class 5 licence with a heavy trailer endorsement and a Class 1 endorsement which allows learning privileges in Classes 1 to 3.

Special notes

Endorsements:

Air Brakes "A"

If you operate a vehicle equipped with an air brake system, you must have the Air Brake Endorsement "A" specified on your licence. An Air Brake Endorsement is not required when operating a Class 3 or 5 vehicle licensed as a farm truck.

If your licence does not bear the endorsement "A", you may operate a motor vehicle equipped with air brakes as a learner, provided your licence permits you to operate that type of vehicle under normal conditions.

To obtain an Air Brake Endorsement, you must pass a supplementary written test and complete a practical demonstration on air brake equipment. For additional information consult the *Saskatchewan Air Brake Manual.* You must provide the appropriate air brake-equipped vehicle for the class of licence for which you are testing.

Motorcycle "M"

If you hold a valid Class 1, 2, 3, 4, 5 or 7 licence, upon application, you may have your licence endorsed to operate a motorcycle.

Requirements for M endorsement:

- Minimum age: 16 years, with parental approval
- Applicant may be requested to submit a medical certificate
- Must meet approved vision standards
- Must complete written or oral tests. Study materials include the *Saskatchewan Driver's Handbook* and the *Motorcycle Driver's Handbook*
- Must take road test on a motorcycle
- Must have a valid driver's licence with a "6" endorsement before a road test appointment

Note: Road tests taken on a motorcycle under 50 cc's or three-wheel motorcycle will result in a restriction on your licence.

School bus "S"

If you hold a valid Class 1, 2, 3, 4 or 5 licence, you may, upon application, receive a school bus endorsement card, providing you:

- file a satisfactory medical certificate (see page 13)
- pass the required supplementary written, vision and sign tests
- complete a circle-check vehicle inspection and road test in the appropriate size of school bus – unrestricted, at least 36 student passengers – restricted, fewer than 36 student passengers

If you are applying for a school bus endorsement, you must be at least 18 years of age and cannot be a novice driver (see page 1).

If you take a road test in a school bus equipped with an automatic transmission, you may be restricted to driving school buses with automatic transmissions.

You must provide the appropriate size of bus for the test.

Note: "Student passengers" – means three passengers to a seat on a school bus.

Learners "1", "2", "3", "4"

A Class 2, 3, 4 or 5 licence may be endorsed to allow you to learn to operate any higher class of vehicle provided you:

- have met approved medical standards (see page 13)
- have passed appropriate knowledge tests
- are accompanied by a driver who holds and has held a valid licence for that class of vehicle for 365 days within the last three years*
- are at least 18 years of age and are not a novice driver

* The accompanying driver must not hold a novice licence.

Learners "6"

If you hold a Class 1, 2, 3, 4, 5 or 7 licence, you may, upon application, have your licence endorsed to operate motorcycles as a learner, providing you:

- pass the required supplementary knowledge tests
- file a medical report if requested
- are at least 16 years of age

A "6" endorsement on a Class 1 - 7 licence is an authority for the operation of a motorcycle for learning purposes only and holders are subject to the following restrictions:

- they may not operate a motorcycle from half an hour after sunset until half an hour before sunrise
- they may not carry passengers
- they must operate within a 100 km radius of the address or secondary address listed on the certificate of registration for the motorcycle

Certificate of Approval

If you operate a Class 4 vehicle to transport passengers, you must file a subsisting Certificate of Good Moral Character/Police Approval signed by the Chief of Police. If you do not reside in a city, the certificate must be signed by a member of the RCMP, a magistrate or a municipal officer of the municipality in which you reside. A Certificate of Approval is not considered subsisting if the person who originally signed the certificate or his/her successor files a Certificate of Withdrawal of Approval with SGI. A driver is not required to re-submit a new Certificate of Good Moral Character/Police Approval each year.

Examinations

The examination of drivers for a Class 1, 2, 3 or 4 driver's licence and school bus endorsement includes:

- Vision screening test based on the established vision standards for the classification sought
- A medical report of the driver's physical condition based on the established standards for the classification sought (See p. 13)
- A knowledge examination for the most part based on the information contained in this manual and the *Saskatchewan Driver's Handbook*. Other practical questions may be included. Written exams can only be attempted once per day
- A road test which consists of two parts:
  (1) The off-street portion. This requires a pre-trip inspection commonly known as a "Circle Check" (described in the Vehicle Condition section – page 51). In each case the applicant will name and point out the item or equipment inspected without any assistance.

      Class 1 applicants will be required to explain to the examiner procedures for coupling and uncoupling.

  (2) The on-street portion will require the applicant to drive the vehicle in traffic. The applicant will be judged on his/her ability to handle the vehicle safely and perform all normal driving tasks correctly, including manoeuvres such as highway turn-about.

      An applicant for a Class 1, 2 or 3 driver's licence or "S" endorsement (bus with a seating capacity over 24 adult passengers) who takes a road test in a vehicle equipped with a standard transmission will be required throughout the entire test to use the clutch properly while shifting gears.

At one point during the test the driver must shift up and down through all the gears. On 13 or 18 speed transmissions the driver must split the top range.

Applicants are required to provide the proper class of vehicle for the test. They must be accompanied to the testing site by a driver licensed to drive the class of vehicle being used.

If a medical examination is required, the applicant must provide proof of the completed medical examination report before any tests may be started. A driver's licence may be revoked or suspended if the driver does not meet the required medical standards.

Applicants must pay for each road test before booking the test.

Road tests will be refused if:

- the vehicle is displaying dangerous goods placards
- the applicant is not in possession of an appropriate receipt and driver's licence
- the vehicle is unsafe or not equipped in accordance with legislation – for example: operational signals, horn, speedometer and brake lights; or defective braking system (including air), muffler or windshield wipers (when raining)
- a current and valid inspection certificate is not in the cab and the unit does not bear a safety inspection decal as required by regulations
- the vehicle's passenger compartment is unclean or does not have a standard manufacturer's seat for the examiner
- the vehicle is not of the applicable class
- the applicant's vision or medical fitness does not meet required standards or if the applicant is unable to produce proof of the medical examination report
- the weight of the unit(s) towed behind a truck does not exceed 4,600 kg (10,000 lbs.)

Failure to keep appointment

A person who fails to cancel an appointment before the test date and who does not show up for the road test will be refused another appointment for at least four weeks. For each additional time an appointment is not kept without cancelling, the waiting period will be extended an extra four weeks. For more information, contact your nearest driver examination office or call toll free 1-800-667-5111.

Restrictions:

A driver's licence may be restricted when road tests are taken in certain vehicles. For example:

> Drivers who are tested for a Class 1, 2 or 3 licence or "S" endorsement in a vehicle equipped with an automatic or electronic shift transmission will be restricted to automatic or electronic shift transmission vehicles in those classes.

Other restrictions may apply. Always check with the driver examiner before making arrangements for your road test or call toll free 1-800-667-5111.

Class 1-4 medical standards

Medical standards

Applicants will be required to submit a report of a medical examination on a prescribed form. Some of the conditions which may prohibit the issuing of a Class 1, 2, 3, 4 or school bus licence or endorsement are:

- seizure disorders
- certain heart or insulin dependent diabetic conditions
- physical disabilities (paralysis, disability, arthritis, amputation)
- blackouts, dizziness or fainting spells
- head injuries
- vision problems or hearing loss

Medical reports will now need to be submitted and approved prior to the start of any testing.

Subsequent medical reports will be requested every:

- five years for drivers 18-45 years of age
- three years for drivers 46-65 years of age
- year for drivers 66 years of age or older

Canada/United States medical reciprocity agreement

Canada and the United States have established a federal agreement dealing with the medical fitness requirements for operators of commercial motor vehicles.

Effective March 30, 1999, Canadian drivers need only produce a valid Saskatchewan Class 1, 2 or 3 driver's licence as proof of medical fitness. Drivers with a Class 4 licence who drive buses with a seating capacity of more than 10 while operating in the United States are also covered by the agreement.

The following Class 1, 2, 3 or 4 drivers are not able to operate commercial motor vehicles while transporting goods or passengers for hire into the United States:

- drivers with insulin-dependent diabetes
- drivers with an established medical history or clinical diagnosis of epilepsy
- drivers who do not meet the minimum hearing requirements to transport dangerous goods
- drivers currently operating under a medical waiver

Drivers with current medical waivers, or restricted privileges, can continue to operate commercially in Canada but will have a "W" restriction added to their licence prohibiting them from operating commercially in the United States.

2. Good driving habits

Attitudes towards driving

An improper attitude in a driver is perhaps the chief contributing factor in motor vehicle collisions.

To qualify as a safe motor vehicle driver, you must not only respect the law, but also understand the need for traffic regulations. All drivers must observe the laws and regulations, realizing that there may be other drivers who do not know or always obey these laws.

As a professional driver, you must practise defensive driving techniques by being willing, at all times, to yield to other drivers and pedestrians.

Emotional attitude

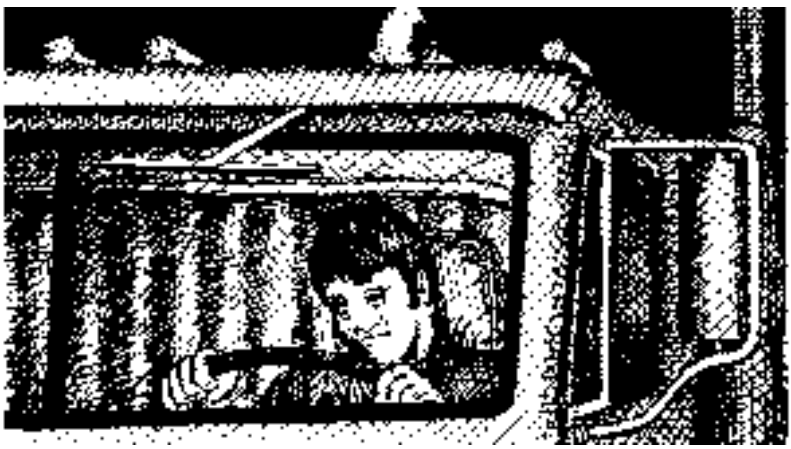
Certain conditions such as worry, anger or anxiety can upset you and distract you from driving. Safe driving demands your full attention at all times.

Arguments at home, annoyance with other drivers and illness or financial problems are some of the things which can distract you from the important job of driving.

Safety demands your complete and constant attention to changing driving situations. You can't control your vehicle if you're not in control of yourself.

Driver condition

The truth is, at some time or other, each of us is unfit to drive. You must be the judge of whether you are fit or not fit to drive. Everybody has good days and bad days. When you can't do your best driving, you owe it to yourself and to others to stay off the road.



What makes a driver unfit?

Inattention: The greatest number of traffic collisions are caused by drivers not paying attention. Any driver is a potential fatal hazard. Careful observation and visual scanning of the entire traffic scene ahead, behind and to either side must be part of your driving. Your

eyes look at countless things you do not really see at all. Your mind concentrates on only a few details and excludes others. You see only the things your mind selects.

Normally, your eyes shift automatically about every two seconds as you drive – provided your attention is on the road. When you are preoccupied, however, this automatic eye shift does not occur. Only by conscious practice to force your eyes to move every two seconds, until it becomes a habit, can you avoid the serious danger of a blank stare in traffic when your mind is not on your driving. Most collisions occur near home and on familiar roads or highways that the driver fails to concentrate on seeing. A moment's lack of attention behind the wheel – whether from poor scanning habits or common distractions such as worry, daydreaming, impatience, tuning the radio, talking to a passenger or casually gazing at billboards and storefronts – can bring about a collision and possibly death.

Fatigue: Driving requires constant alertness. It's tiring. Even if you're just out driving for fun, fatigue can creep up on you before you know it. You become irritable. You make bad driving decisions. You take longer to react to changing conditions. When this happens, it's time to take a break.

Extreme fatigue may lead to a dream state or to dozing behind the wheel. Your vehicle is not equipped with an "automatic pilot" control. So don't drive when you're dead-tired. You could end up dead.

In Canada, a driver can drive a commercial vehicle under the National Safety Code up to 13 hours a day, but it is recommended the driver not drive more than two hours without stopping for a rest. Beware of highway hypnosis – that condition of fatigue and boredom that causes your senses to become dull, your eyes to become fixed and makes you unable to react to traffic around you.

Stress: You drive not only with your head, hands and feet, but with your personality as well. Don't drive when you're so angry or upset that you can't concentrate on driving.

Driving might also cause you undue stress if you are sick or if you have been sick. Even a mild cold can cause enough discomfort on a long trip to make you tired and distracted.

Alcohol: Alcohol is a drug that slows your reflexes and dulls your judgment. It makes no difference whether you drink beer, wine or liquor. And once it's in your body, only time will remove it. Black coffee, cold showers or exercise will **not** sober you.

Alcohol's effect on you will vary, depending on if you are tired, what and when you have eaten, or whether you are taking any other drugs. No amount of alcohol is completely safe. The simple rule is: if you're drinking, don't drive.

Other drugs: Anyone under the influence of illegal, mind-altering drugs such as marijuana, LSD or heroin must not attempt to drive. These drugs are often impure and their strength varies. They affect a person's mood, vision, reaction and ability to judge time and space. They tend to make users indifferent to, or even unaware of, their surroundings. The total effects are unpredictable.

Prescription and even over-the-counter drugs can also affect your driving. Diet pills (also known as pep pills or "speed") can give you a false feeling of alertness and cause you to take foolish risks. Sleeping pills can make thinking difficult and affect your emotions and your driving skills hours after you have taken them.

Allergy pills and cold remedies can make you sleepy and dull your senses. Tranquilizers can make you less alert and more sleepy.

Be especially cautious of driving after taking a new drug, until you know how it will affect you. Driving under the influence of any controlled drug is illegal.

Night vision

Some drivers seem reluctant to do two things that are really important to safe driving at night: reduce speed and increase following distance. If you drive so fast that you can't stop within the area illuminated by your vehicle's headlights, you're moving too fast. And if you don't increase following distance, the difficulty in judging how fast the vehicle ahead of you is moving creates a very hazardous situation.

Not everyone sees with the same degree of perception and accuracy. At night, our ability to see diminishes and so does our ability to sort out different objects. Depth perception and judgment of distance are also affected.

A major problem faced in night driving is "glare-blindness" caused by approaching lights. Some people recover quickly, but others require several seconds for their eyes to re-adjust. When you're faced with glare, slow down and avoid staring directly into approaching lights.

Speed

Regulatory signs advise you of the maximum speed when all conditions are ideal. You must assess and adjust your speed to the:

- road condition (rain, frost, ice, etc.)
- tire conditions (tread, inflation)
- brake condition (adjustment)
- light condition (glare, shadows)
- visibility (dusk, rain, fog, smoke, dust)
- traffic density (vehicles, pedestrians, cyclists)
- load (weight, length, width, type)
- driver condition (fatigue, tension)

Traffic tempo: You must set your speed according to the existing conditions but, at the same time, match your vehicle's speed to the traffic tempo. If you drive faster than the traffic flow, you are increasing your chances of having a collision. You are continually reducing your safe following distance, thus losing stopping space in front. You make more lane changes to thread your way past the vehicles ahead, increasing your chances for collision. Driving decisions are increased because you are creating more driving problems, thus increasing the likelihood of a wrong decision. Faster driving will result in faster mental fatigue. Reading the traffic pattern requires you to scan the full picture ahead and to the sides by moving your eyes. The faster you push through traffic, the more rapid the scanning process, building tension and fatigue.

If you travel appreciably slower than the tempo of the traffic, you increase your collision chances from behind and from the sides. Vehicles following too closely behind you create hazards. Vehicles overtaking and cutting in are continually occupying your stopping space.

If your stops are gradual, you give the driver following you adequate notice of your speed reduction.

Following distance

You should be constantly on the defensive to prevent a "rear-end" collision with other vehicles. This applies not only to the vehicle you are following, but also to the vehicles following you.

The collision from behind may not always be avoidable, but the professional driver can reduce the probability. The first step in prevention is assuring that your own stops are smooth and gradual. To do this, practice these simple but effective driving habits:

- Look well ahead at the traffic to pick out the clues that indicate speed changes and stops developing in the traffic pattern.

- Look ahead for traffic control devices to anticipate light changes before reaching the intersection. Traffic lights that have been green for some time before you reach the intersection are probably "stale" and could change at any time. Streets with synchronized lights permit you to adjust your speed to the traffic lights.

- Maintain an adequate following distance from the vehicles ahead so that a smooth, gradual stop may be completed, even if the vehicle ahead has made a "panic stop."

Following distance

Drivers of semi-trailer units, trucks and buses sometimes drive in a caravan. That way, the first truck in line breaks the wind resistance for the trucks following close behind. This leaves insufficient stopping distance and prevents faster traffic from passing one truck at a time. Law prohibits this practice.

Time interval following distance

If you drive a taxi, ambulance, police vehicle or van, you should maintain a three second interval between your vehicle and the vehicle ahead. Just what does this mean? It's really quite simple if you follow these two steps:

1. As the vehicle in front of you passes any stationary point of reference (for example, a patch of oil on the pavement, a power pole, a road sign, a bridge or overpass) count seconds – out loud at first – by simply saying "one thousand and one, one thousand and two, one thousand and three."

2. If the vehicle you are driving reaches the reference point you selected before "one thousand and three," you are following too closely. You should drop further back. If, however, you finished your count before you reach your point of reference, then your following distance is actually greater than required, giving you an extra safety cushion.

If you drive a power unit, semi-trailer, bus, truck or truck and trailer, round out the length of the vehicle to the nearest metre and divide by three to determine your count.

Example: If your truck and trailer is 14.4 m, round to 15 m, then divide by three.

$$\frac{15}{3} = 5 \text{ second count}$$

When road conditions change because of rain, snow or ice, lengthen the count to suit the changing conditions.

Space must be allowed for other vehicles to pull in between you and the vehicle ahead.

A short observation of the driving technique of the driver ahead will tip off the professional driver as to what might be expected. If the vehicle ahead is a tailgater, you can expect to have frequent "panic stops." The driver ahead who maintains a safe following distance usually has a longer lighter brake application for stops, giving you adequate notice by their brake lights that they are slowing down.

The tailgater

A driver of commercial vehicles such as buses, trucks and power units and semi-trailers must rely on outside mirrors for rear vision.

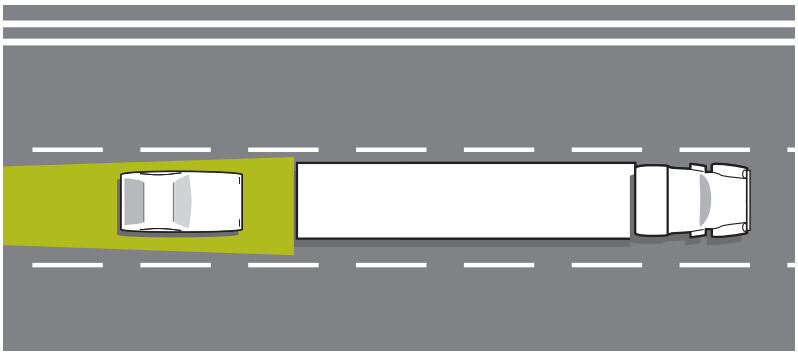
A tailgater often drives directly behind the commercial vehicles and may not be visible.

It may not always be possible for you to prevent a rear-end collision by an irresponsible driver. There is a bonus factor, however. If your stop is gradual, the speed of impact will be considerably less than if you stopped suddenly.

The tailgater is usually a person who lacks patience and foresight. This lack of patience could be caused by your vehicle's speed and the way you drive. By watching the rear mirrors, you can often protect yourself from a tailgater by helping the tailgater pass your vehicle. The tailgater is easier to deal with ahead of you than behind you. Don't let the tailgater put an incident on your record!

Upon approaching an upgrade where there is a passing lane, the driver of a vehicle travelling slower than the normal traffic flow must use the right lane. Where such lanes are not provided, the driver of a slower vehicle should allow the traffic that has built up to pass at the earliest safe opportunity.

Experienced drivers adjust their pace according to conditions and traffic tempo, maintain a safe stopping distance ahead and behind, and maintain a driving space all around their vehicle. They have time to read the traffic pattern and continuously plan an escape route should their danger zone become occupied.



Intersections

The basic right of way rules are explained in the *Saskatchewan Driver's Handbook* and apply to drivers of all vehicles.

Most hazards occur at intersections. As a result, knowledge of the right-of-way rules is essential for all drivers. As a defensive driver, you should not depend on other drivers to always obey these rules. To avoid intersection collisions, it is suggested that you follow these common sense practices:

- Never enter a limited view intersection at a speed at which you cannot stop safely. You should have your right foot off the accelerator and poised over the brake pedal in case of an emergency stop. This will save on reaction time
- Do not assume you have the right of way, even when it is reinforced by traffic lights or traffic signs. Look left and right before entering any intersection. Look for and expect the violator to run the sign or lights
- Be alert and anticipate a change of a green light to avoid running through an amber or red light. When getting the green "Go" light, check left, right and ahead for the "Late Runners," before proceeding
- Do not depend on other drivers to signal or execute their turns correctly
- It is not a good practice to pass another vehicle at the approach to, or in, an intersection

Do not use the size of your vehicle to "bluff" for the right of way. Give the right of way rather than taking it. As well, you should pay attention to each and every intersection, laneway or driveway.

Railway crossings

Crossing railway tracks can be especially hazardous for drivers of large vehicles because of the following:

- Longer vehicles need to travel further and will need more time to clear a crossing
- Heavier vehicles take more time and need more room to stop before a crossing
- Larger vehicles that have low ground clearances may cause trailers to get stuck on or displace the tracks
- Larger trucks are more likely to derail a train if there is a collision

Other considerations:

Never permit traffic conditions to trap you in a position where you have to stop on the tracks. Be sure you can get all the way across the tracks before you start across.

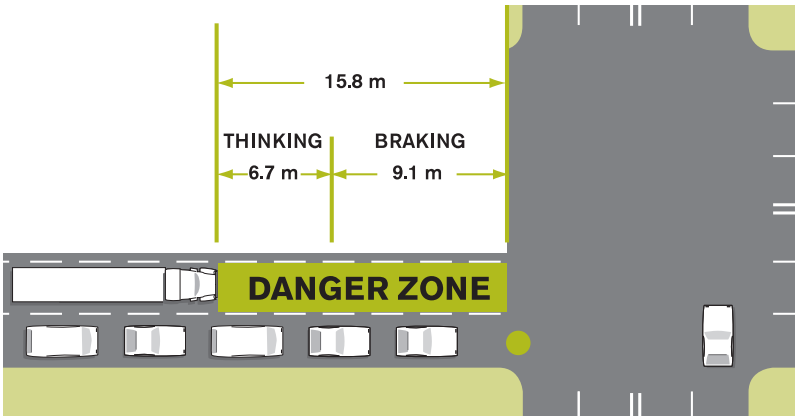
If your vehicle stalls or gets stuck on a crossing, get out of the vehicle immediately. If a train is coming, move away from the track toward the oncoming train. This will reduce the chances of being struck by flying debris if the train hits the vehicle. Contact the railway company if its emergency number is posted or call 911.

Danger zones

The danger zone of any vehicle can be described as the area directly in front of the vehicle in which the vehicle cannot stop. In the following diagram, the danger zone is shown as the shaded area. As the speed increases, the danger zone increases; if the road condition is less than ideal because of rain, snow, ice or gravel, etc., the danger zone is increased. When you fail to reduce your vehicle's speed to suit these road conditions, the danger zone increases.

At 30 km/h you can stop — just!

The truck is approximately three and one-half car lengths from the crosswalk when the driver sees the pedestrian. Under ideal conditions, the driver may be able to stop just in time.



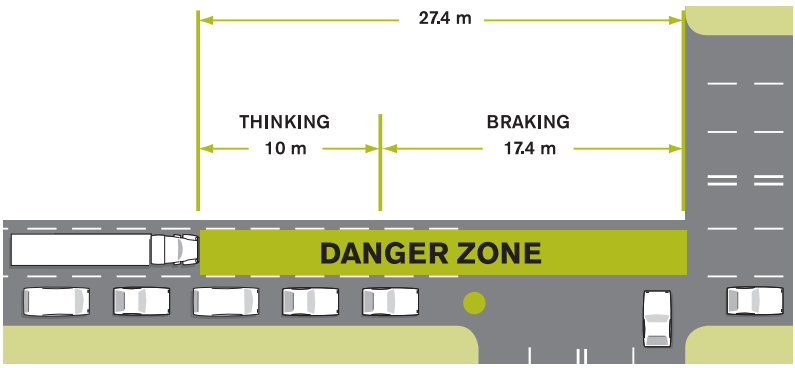
At 50 km/h you cannot stop in time! (see diagram on next page)

Even under ideal conditions, the driver of the truck cannot stop in time! Both the pedestrian and the car on the right are about to enter the danger zone!

The distances in the diagrams are approximations only for illustration, as braking distances will vary according to the weight of the vehicle, condition of the brakes and the condition of the road surface.

Commercial vehicles, like passenger vehicles, have decreased stopping distances when conditions become less than ideal by one sure means: reduce speed.

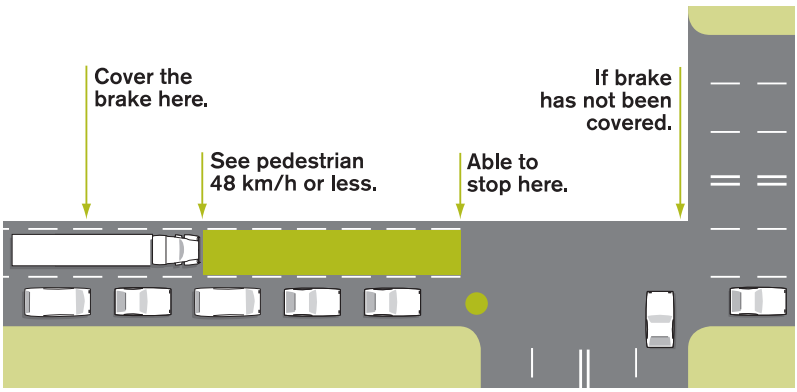
If another vehicle or a pedestrian should enter the danger zone, the driver cannot stop the vehicle in time. It is not physically possible.



Shrinking the danger zone

The illustration of the danger zones shows how the distance is shortened if the speed of the vehicle is reduced.

The zone can also be reduced if you form the habit of "covering the brake" when you recognize potential danger developing. In the following diagram, the driver has recognized that he/she is nearing an intersection which is a danger spot. The driver knows the line of cars on the right may hide hazards from view. The driver removes his/her foot from the accelerator and places it lightly on the brake. When the driver first sees the hazard, the reaction time has been reduced because the driver removed his/her foot from the accelerator. Therefore, the stopping distance has been reduced and he/she now has a better chance of stopping before the crosswalk, rather than across the intersection.



Speed, weight, stopping

If the weight of the vehicle is doubled, it requires double the braking force to stop the vehicle. If the speed is doubled, it requires four times the braking force to stop the vehicle.

If the weight and the speed are doubled, it requires eight times the braking force to stop the vehicle.

Braking

Bringing a vehicle to a complete stop on a level roadway usually requires only a single application of the brakes. The degree of application will be determined by the speed, weight and degree of emergency.

When the speed of the vehicle has been decreased sufficiently, ease off the amount of brake application and the actual stop will be gradual. The professional driver can perfect these stops by practising the amount of brake application release to prevent a jerk-back at the actual stop. This braking skill, coupled with factors of:

- looking ahead to time stops
- maintaining safe following distance
- setting speed in relation to seeing distance ensures a smooth stop every time. This is the one factor on which most passengers judge the driver's skill

Stopping on an icy road surface will require you to threshold brake to prevent the wheels from locking up. On vehicles equipped with anti-lock brakes, apply according to the vehicle manufacturer's instructions. A slow revolving wheel on an icy surface will be more effective than a locked wheel skidding on icy surfaces. To proceed down a steep grade, select a gear low enough to control the speed (usually one gear below the one you would use to climb the same hill) and use engine retarder brakes if so equipped. This should reduce the need to use your brakes to a point where they will overheat and your air supply will not be seriously depleted.

To determine the safe speed to travel down a steep grade, remember one factor: The speed which will allow a safe stop at any time while on the hill.

If you are unable to stop to prevent a collision, the fact that you were travelling downhill is no excuse; your speed should have been adjusted to the condition.

The driver who claims the excuse for speeding was because he/she was going downhill is neither a professional nor a defensive driver. The professional driver uses brakes and gear selection to control the vehicle and doesn't need excuses.

Note: Trailers weighing over 1,360 kg (3,000 lbs) must be equipped with brakes.

Large vehicles such as truck-trailer and semi-trailer units have engine governors which control the maximum rpm at which the engine may be operated. When descending steep grades, special caution should be taken by maintaining correct speed in relation to gear selection to keep the engine rpm at least 200 to 300 below the maximum governed rpm. In other words, if the momentum of the unit is allowed to push the engine over its governed speed, engine damage could occur.

Retarders

Drivers of trucks equipped with engine brake retarders must avoid unnecessary use of these systems in cities and residential areas. The use of retarders on vehicles which are inadequately muffled results in a harsh irritating noise. The engine brake retarder develops its retarding efficiency at higher engine rpm, therefore, gear selection is important. The gear selected to descend the grade is usually determined by the driver's decision of the gear ratio needed to climb the grade. Gear selection should be made before descending the grade, rather than on the downgrade, to minimize the chance of missing a shift. The driver of a truck equipped with a retarder system must be familiar with the manufacturer's recommended use of the retarder under all road and weather conditions.

Combination braking

In a combination of vehicles (such as a truck and trailer, or power unit with a semi-trailer unit) equipped with an air brake system, the trailer brakes are applied along with the tractor brakes by use of the foot control valve. This is often referred to as "balanced braking." The application pressure of the trailer brakes is equal to the application pressure of the tractor brakes. The trailer brakes may be applied independently of the tractor brakes by use of the hand control valve. If the driver wishes, the amount of application on the trailer brakes may be increased during a foot valve application by using a higher application with the hand valve. Trailers equipped with electric or vacuum brakes are operated in a similar manner.

Brakes must be applied cautiously when the vehicle is negotiating a curve or travelling on wet or icy surfaces. Over-braking could result in "jack-knifing" or "skidding."

Water on roadways

Water entering brake drums will reduce the braking effort, so avoid running through large amounts of water whenever possible. Place a slight drag on the brakes when it becomes necessary to run through water, to reduce the amount of water admitted to the drums and shoes. During excessively wet conditions, or after passing through water, test the brakes. It may be necessary to drag the brakes slightly for a short distance to dry them out and restore normal braking. Always reduce your speed before driving through large pools of water on the road.

Passing and being passed

Passing: On occasion, drivers of commercial vehicles are guilty of breaches of driving etiquette, which can irritate the motoring public. For example, one commercial vehicle may pass another when the speed differential is so slight that it takes a long time to complete the pass. In doing this, the passing truck occupies the fast traffic lane when it is not absolutely necessary, thus causing the following traffic to reduce its speed, resulting in bunching. “Bunching” on freeways and fast highways is a potential hazard.

Being passed: Do not direct the vehicle following you to pass; let the driver make his/her own driving decision. You may be encouraging a driver with limited experience to over-drive his/her ability.

Do not encourage following traffic to overtake your vehicle when it would necessitate their crossing over “no passing” lines.

When the driver does make his/her move, help him/her complete the pass. Reduce your speed if necessary. While driving beside your vehicle, the driver who is attempting to pass you is occupying the space you may need for an emergency out!

Large commercial vehicles have a louder exhaust resonance than passenger vehicles. Their size and highway noise often give the impression that they are travelling faster than they actually are. When passing passenger vehicles, the professional driver observes speed limits carefully, and guards against startling the inexperienced or nervous driver.

Large commercial vehicles travelling at high speeds create varying degrees of air turbulence that can be hazardous to smaller passenger vehicles. A car riding directly in front of the truck, beside the saddle tank area or at the immediate rear of the trailer, is in an area of air turbulence. Be alert for the driver who rides in these areas. He/she may be forced off a narrow roadway or drawn into the side of the vehicle.

Passing on the right

Passing on the right is permitted only:

- when overtaking another vehicle making a left turn or signalling intent to make a left turn
- on one-way traffic streets
- on streets and highways marked for multi-lanes

You must not drive off the roadway onto the shoulder to pass another vehicle.

Alleys, lanes and side roads

The driver of a vehicle shall, before entering a street from a lane or alley within a city or town, yield the right of way to pedestrians and vehicles, and shall not proceed until safe to do so.

Curves and jack-knifing

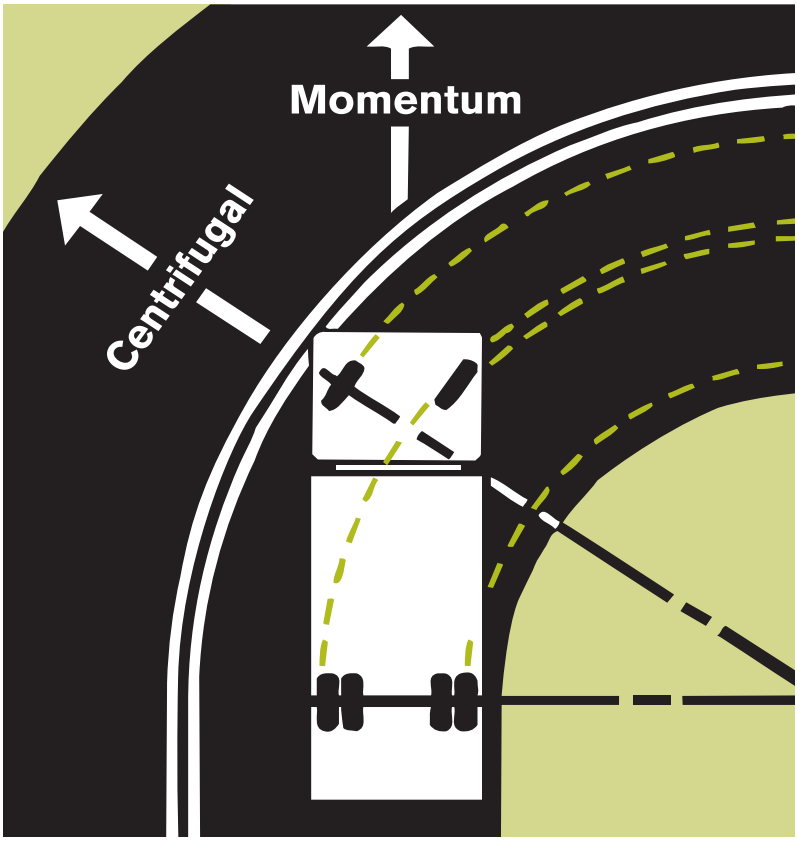
A vehicle travelling in a straight line develops a force called momentum. The higher the speed, the greater the force. When the vehicle enters a curve, it must overcome the force of momentum if it is to change its direction from the straight line in which it has been travelling. A vehicle travelling around a curve develops a force called centrifugal force. The greater the speed at which a vehicle travels around a curve, the greater the centrifugal force developed. This centrifugal force pushes outward from the centre of the curve and tries to keep the object on its original straight line.

The degree of control you are able to maintain over your vehicle is determined by the amount of traction your vehicle's tires have with the road surface. Entering a curve too fast can result in skidding or a rollover. Applying brakes in a curve can cause a skid or a jack-knife.

To avoid rolling, skidding or jack-knifing, reduce your speed before reaching the curve. Enter the curve at a speed that will not require braking. This will permit you to apply gradual power in the curve. The application of a small amount of power in a curve counteracts the centrifugal force.

For the safe negotiation of curves, here are some tips to follow:

- spot the curve in advance by heeding the curve sign warning and suggested speed, and adjust your speed accordingly
- slow down before entering the curve
- accelerate when in the curve as conditions permit



Sharing the road

As a professional driver, you are responsible for watching for other vehicles including motor vehicles, bicycles and motorcycles. Treat them courteously, since they have the same right to use the streets and highways, providing they are complying with the laws. Like a pedestrian, a bicycle or motorcycle is no match for a car or truck. If there is a collision, the cyclist is almost always injured or killed.

A problem for drivers is the inability to **see** the cyclist. It is your responsibility to be alert! Motorcyclists need a complete traffic lane: do not try to share a lane with one.

Cycle size

A cycle's smaller size makes it appear to be farther away and moving slower. Compensate for this illusion by allowing more time and distance for stopping. Most motorcycles can stop more quickly than cars. Unless you've allowed sufficient following distance, you might not realize the motorcycle has stopped before it's too late to avoid a collision. They may hit a bump, rut, a railway track or a hole and swerve or upset.

Blind spot

Before you change lanes, always look in the rear-view mirror or shoulder check (if possible). You can easily lose a motorcycle in your blind spot.

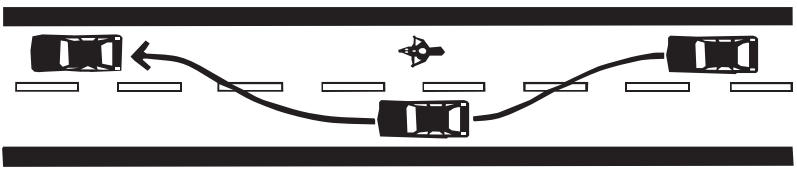
Passing

When you pass, especially on gravel or in wet weather, remember that you may throw dirt or water at the cyclist. Pass the cyclist as if he/she were a car or truck. Don't crowd him/her and be well ahead before you pull back in.

If a cyclist is riding in the right wheel track, don't pass in his/her lane. Motorcycles, like cars, are entitled to a full lane. Another danger of passing too closely is creating turbulence which can cause the cyclist to wobble or lose control.

Sometimes a motorcycle's turn signals are hard to see. Watch the driver. If they shoulder-check or tilt their machine, they are probably going to change lanes or turn.

After dark, particularly in city areas, be alert for bicycles and mopeds.



Getting started

(Gasoline powered, not governed)

Start in low gear, using only enough power to place the vehicle in motion. Don't rev the engine up in this gear to maximum rpm, but shift to the next higher gear. Progress through each higher gear, increasing vehicle speed and engine rpm together. As each shift is completed, engage the clutch smoothly to avoid shock to the drive train, load and passengers.

Using an engine tachometer in shifting

Most engine manufacturers recommend 85 per cent of governed engine speed to be the most efficient for normal operation of a vehicle. Knowing the governed speed, a simple calculation will give the most efficient operating speed. When driving, a glance at the tachometer will indicate the necessity of a change in gear.

All transmissions have a known "split" between gear ratios and knowing your transmission will give you the drop in revs required to make a clean shift.

Shifting down is also made easier by a tachometer. In reversing the above procedure, knowing the "split" or rpm difference between the gears, a driver will be able to increase the engine revs to make a clean downshift.

Shifting up through the gears (main transmission)

In each gear, sufficient speed must be built up to avoid labouring the engine in that gear; speed must be sufficient so the engine will not be laboured when the next higher gear is reached. Double-clutching must be used on most manual-shift truck transmissions. Shifting is faster and smoother when the double-clutch procedure of depressing the clutch twice with each change of gears is used.

Shifting down

Be alert to changing conditions which may require reduced speed and shifting to a lower gear. Don't wait until the engine starts to labour before shifting down. For dangerous downgrades, gears should be downshifted to make use of engine braking. A good driver will downshift before passing the crest of a hill because it's dangerous to downshift past that point. If you miss a gear you're in trouble.

In addition, if your brakes fail on a level road, you should shift to a lower gear and use engine compression to help stop the vehicle.

Your knowledge and ability to use the clutch and to select and shift gears, as would be required in the normal operation of the vehicle, will be observed during the road test.

Visibility and safety

Drivers of large trucks and buses generally have a better view of the road and traffic ahead, and to the sides, than the passenger car driver. The seated height in most instances is higher and windshields are larger.

Outside rear view mirrors reflect a large area, and if properly mounted and adjusted, give the driver a clear view of the roadway behind, **except** for the blind area immediately behind the vehicle.

Operators of Class 1, 2 and 3 vehicles, school buses and vans must depend on their mirrors to a far greater extent than drivers of passenger cars in order to observe traffic conditions behind them while manoeuvring. It is vital that these be maintained in good condition at all times. Some drivers use a convex mirror which gives them a much better and clearer view of traffic beside and behind than the ordinary mirror. This is a good practice and you should learn to use the convex mirror whenever manoeuvring in confined spaces, or where there is a chance of other traffic or pedestrians getting in the way. Vehicles transporting wide loads must be equipped with mirrors which extend beyond the extreme portion of the load to give clear visibility to the rear at all times.

Parking a vehicle on highways

Never park your vehicle in a manner than would block other drivers' views of an intersection. Preferably park 153 m (500 ft.) or more away from an intersection when stopping for a break.

To ensure that your vehicle will stay in position when parked, the following precautions must be observed:

1. Set the parking brake in the power unit.

2. Place the transmission in the lowest forward or reverse gear.

3. If the vehicle is equipped with a two-speed axle, the axle must be in low range.

4. If the vehicle is equipped with an auxiliary transmission, the transmission must be in low range.

5. If the vehicle is on a grade, turn the front wheels in the appropriate direction.

   With curb
   Downhill: Turn front wheels to the right.
   Uphill: Turn front wheels to the left.
   (Allow vehicle to roll until front wheel touches curb.)
   Block vehicle.

   No curb
   When parking downhill or uphill with a straight truck, turn front wheels sharply to the right.
   Block the wheels. For a tractor trailer, leave the wheels straight, apply the parking brake and block the wheels.

6. **Under no circumstances should you use the trailer hand valve to hold a parked vehicle which will be left unattended.**

7. When a vehicle is parked on a highway, it must be illuminated to warn other motorists of an obstruction as follows:
   - If the vehicle is completely clear of the travelled section, not disabled, and will be parked for less than **four** hours – activate hazard warning lamps
   - If the vehicle intrudes into the travelled section, or is disabled or will be parked for more than four hours – place flares as follows:
     one – 30 m in front of the vehicle
     one – 30 m behind the vehicle
     one – 1 m behind the vehicle
     All flares should be placed one metre in from the outside edge of the vehicle

Backing

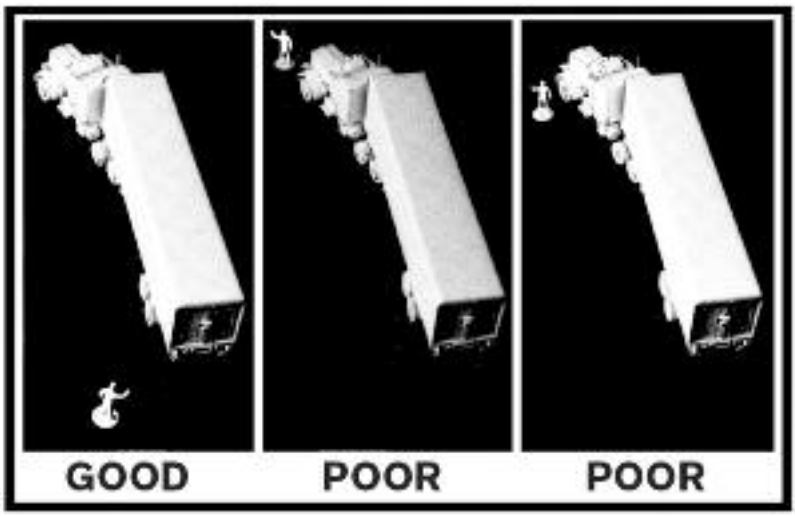
The driver is always responsible when backing.

Backing becomes dangerous if you don't ensure the way is clear.

Investigation of backing accidents often indicates that they are not accidents but are evidence of the failure to observe.

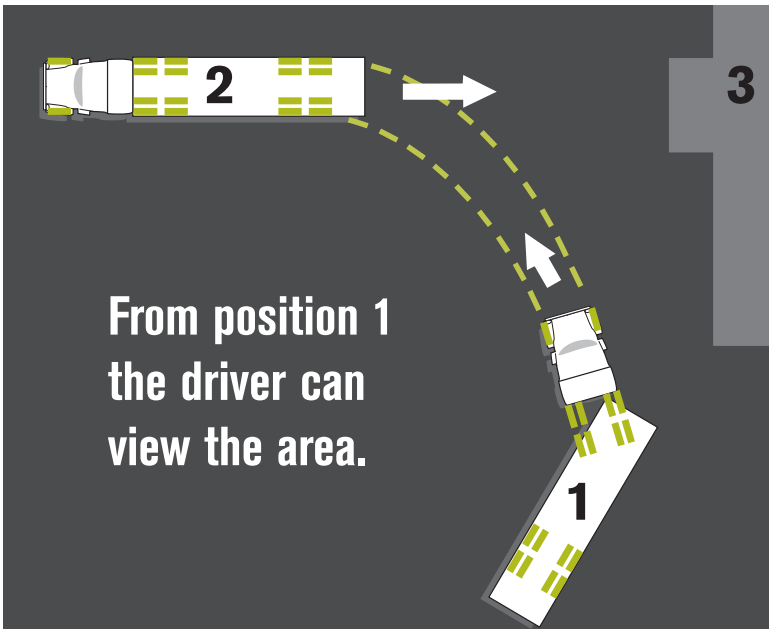
All drivers can reduce backing accidents if they follow these backing rules:

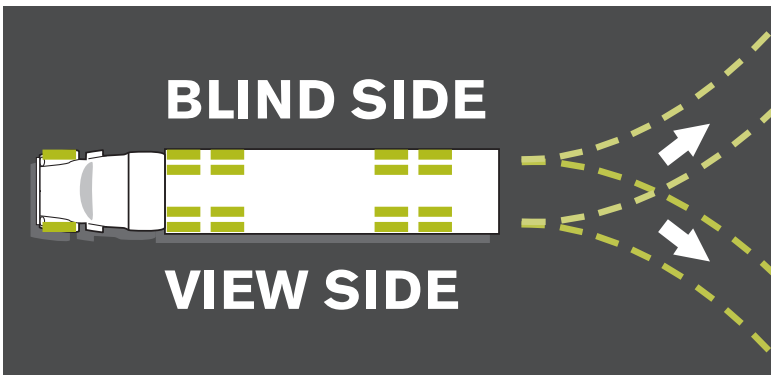
- Avoid unnecessary backing – plan ahead to minimize backing distances
- Use a guide whenever possible. The guide should have a clear continuous view of the backing path the vehicle will follow and should be visible to you throughout the manoeuvre
- Whenever possible, plan your approach so you can view the area into which you will be backing
- Don't back the vehicle to the blind side when it is possible to back to the view side

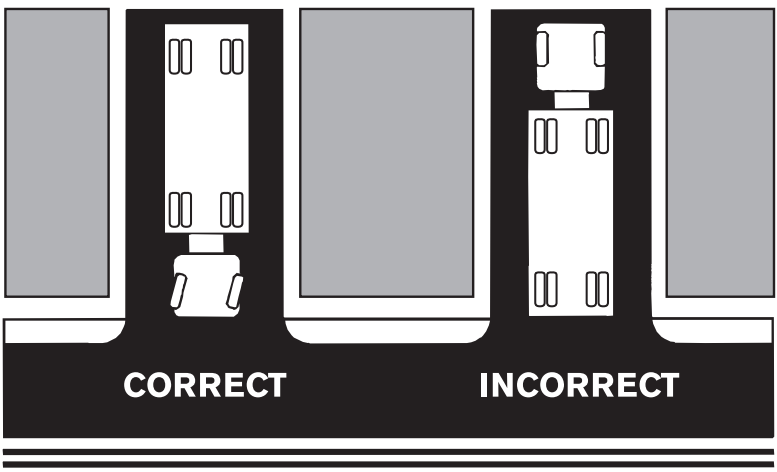


- Always back out of traffic rather than into traffic. The left driver (opposite page, bottom illustration) has backed out of traffic. When he/she leaves the laneway, he/she will be able to observe traffic readily. The right driver has taken the easy way out of traffic, but now faces the problem of backing into traffic to leave the laneway
- Before backing a vehicle without a guide you must:
  - Set the park brake
  - Step out of the vehicle and look at the backing area for hazards
  - Check for clearances and obstacles above, below, to the sides, to the rear and to the front of the vehicle
  - **Enter the cab:** if there is no guide present, sound horn before moving. Observe both mirrors while backing slowly. If the backing distance is long, stop at intervals and re-check behind, above, below, to the side and ahead. Rather than making one long backing manoeuvre, it is safer to make a series of short backing manoeuvres

A human life is worth more than the few extra moments it takes to be sure the way is clear. Remember, even with a guide, you are responsible for any collision which might occur as a result of your actions.







Tires

The amount of control the driver can maintain over a vehicle depends upon the amount of traction between the tires and the road surface.

Tire pressure and tire conditions are important factors in safe vehicle operation.

About pressure

The rotation of the tires under load causes a flexing of the casing. This flexing causes internal friction which generates heat. The tires dissipate the heat to the atmosphere. If the correct tire size is used in accordance with the load carried and tires have the proper air pressure at the start of the trip, the heat build-up will reach a heat balance temperature for which the tire is designed. The cooling rate will balance the heating rate.

If the tires are under-inflated or over-loaded for their size, or are subject to too much speed, the flexing action will be increased. This will result in the heat build-up rate exceeding the cooling rate and the tire will overheat. As the heat builds up, it causes the air pressure within the tire to increase to pressures which are higher than that for which the tire is designed.

Bleeding pressure

If the tire has the correct pressure when it is cool, the heat build-up which is normal will cause the pressure within the tire to increase and reduce the amount of wall flexing, controlling the heat build-up. If the driver bleeds the pressure down on a warm tire, the cooling balance will be upset and the tire will generate more heat. **Never bleed down a warm tire.** Pressure should be checked and adjusted when the tires are cool.

Tire pressure and tire wear

Correct tire pressure is an important influence on tire wear and steering control. An over-inflated tire will result in centre tread wear. Over-inflation of a tire also results in less tread surface being in contact with the road surface, which reduces the amount of **traction**.

An under-inflated tire results in wear on the outer edges of the tread surface. On a wet road surface, an under-inflated tire will not squeeze the water out from under the tire surfaces as well as a correctly inflated tire will. If the tire is under-inflated, it has more chance of riding up on a film of water (hydroplaning).

The amount of traction with the road surface would be greatly reduced, in turn reducing steering control.

Tire condition

Regulations define the limitations of tire wear and condition permissible for certain vehicle operation.

The professional driver must be familiar with the standards as defined in regulations for Vehicle Safety Inspection requirements.

Tire matching

Never mount bias and radial tires on the same axle. Always ensure tire diameters are within 12.5 mm (1/2 in.) of each other on a set of duals.

Carbon monoxide poisoning

Carbon monoxide poisoning is an ever-present danger when you operate a motor vehicle. It is odourless, colourless and tasteless, and therefore hard to detect. It is in the exhaust of every motor vehicle. This makes it essential you keep a constant check on your exhaust system for leaks.

Never run your engine in a closed garage. Maintain good ventilation in the cab when you drive. Don't follow too closely behind another car that has a smoking exhaust.

If you get dizzy or drowsy while driving, **stop**, get out and get plenty of fresh air.

Fire

Fire prevention in and around a vehicle is easier and cheaper than fighting a vehicle fire. Practise the following rules:

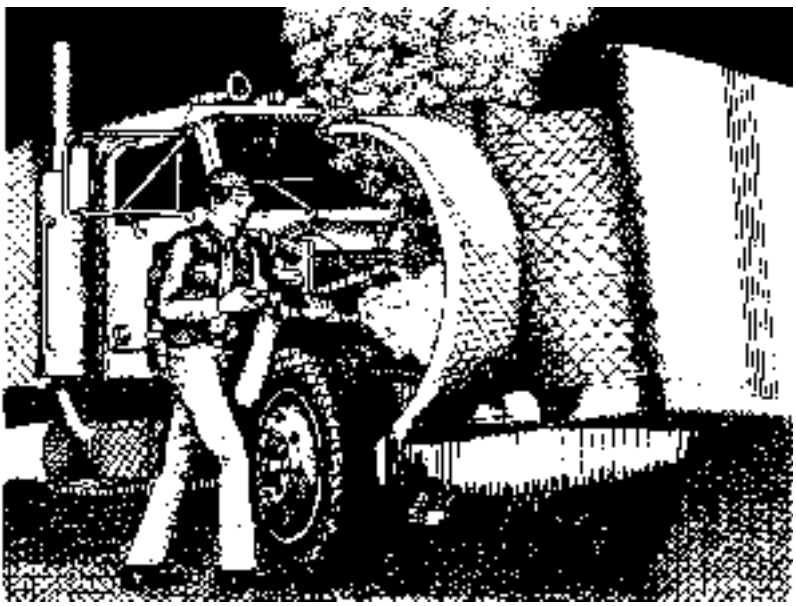
- Never start a vehicle that has a fuel leak. Hose away or wipe up spilled fuel
- Shut off engines when refuelling vehicles
- Ground the fuel hose nozzle against the filler pipe of the truck tank before delivering fuel
- Don't smoke in garages or near fuelling areas
- Never throw cigarette butts out of cab windows. They could blow back into tarps or loads
- Check tires often for low pressure. Soft tires build heat. Flat or soft tires, which have become overheated, should be removed immediately. Do not move the vehicle until the tires have cooled
- Ensure parking brakes and service brakes are fully released. Dragging brakes generate heat and can ignite grease in hubs when the vehicle stops. Make frequent checks of hubs and brake drums for overheating
- Keep fire extinguishers in good working condition

Fire fighting

Fighting a fire efficiently requires quick thinking and fast action based on training. All drivers should inspect the fire fighting equipment on their vehicle daily.

Familiarization with types of fires that could occur on the particular vehicle being driven, together with a study of the following, could prevent the loss of a vehicle or personal injury:

- Water spreads gasoline or oil fires. Use extinguishers, sand or dirt to smother
- Use extinguishers only enough to knock down flames; keep some in reserve for flare ups
- Disconnect battery cables first for electrical fires. (Shutting off switches and disconnecting battery cables of vehicles involved in accidents can prevent fires caused by leaking fuel, etc.)
- In the case of fires occurring on combination units, if you are sure you can do so safely, disconnect the tractor from the trailer and separate the units to a safe distance apart
- Whenever possible, fight fires with the wind at your back. (This lessens the chance of asphyxiation)
- In the case of under hood fires – don't throw the hood open. Raise the hood very slightly to fight the fire. If the hood cannot be raised, direct your extinguisher from underneath the vehicle or through the radiator
- Have the first spectator call the fire department. Warn others of the danger of explosion of gasoline or flammable loads and advise them to keep back a safe distance
- Don't risk your own life. Gasoline fires can spread rapidly or explode



About fire extinguishers

Multi-purpose dry chemical (monoammoniumphosphate base) extinguishers marked B.C. extinguish grease, oil, gasoline and electrical fires. If the cylinder is marked A.B.C., it will also extinguish class “A” fires such as paper and cloth. The operator can use these extinguishers without fear of the contents being a health hazard or causing bodily injury.

Petroleum (flammable) hauling vehicles must have an extinguisher with a rating of not less than 20 B.C. or two of 10 B.C.

CO2 extinguishers (carbon-dioxide) must be used in open spaces. There is danger of smothering.

Vehicles required to carry a fire extinguisher

Every vehicle registered as a commercial vehicle transporting fuel petroleum products and every vehicle registered as a public service vehicle, except trailers, must be equipped with a fire extinguisher of a design or type approved by Underwriters Laboratories, and the extinguisher shall at all times be kept in satisfactory operating condition. Most school buses are required to carry an operative fire extinguisher of at least 2A-10 B.C. If it is a 2000 or newer bus, an operative fire extinguisher of at least 3A-6gfO10P [cldodive uaWaUceObyP

A growing priority: Fuel efficiency

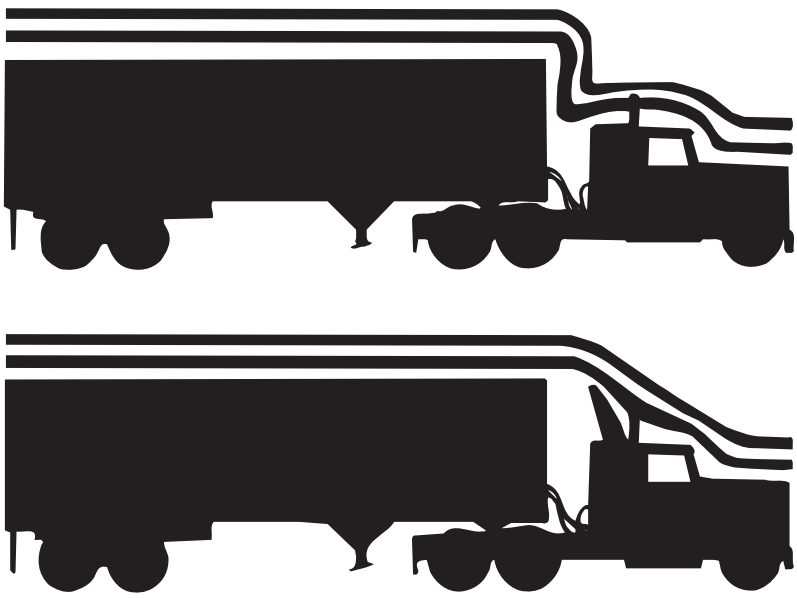
As fuel supplies decline and prices fluctuate, independent drivers and major transport companies are struggling to accurately budget for fuel costs – and are actively searching for ways to keep those costs under control.

Of course, money isn't the only consideration. The environment is a key factor, too. Nearly 30 per cent of all greenhouse gas emissions in Canada are produced by the road transportation sector, a significant portion of them from heavy-duty vehicles. Fortunately, there are many practical decisions you can make as a driver to be more fuel-efficient – from vehicle spec'ing to at-the-wheel techniques and behaviours.

Making smart choices

You may not be able to fight rising gas prices, but your driving habits can reduce the amount of fuel you burn. Here are some steps you can take:

- read the owner's manual for your vehicle and follow the manufacturer's driving recommendations
- use summer fuel whenever possible as it can improve fuel economy by as much as three per cent
- optimize tractor aerodynamics: reducing aerodynamic drag by 10 per cent can increase fuel efficiency by five per cent
- use air deflectors as they reduce air pressure on a vehicle and provide fuel savings in the three to 10 per cent range



- consider using doubles or triples instead of single trailers where applicable
- use rib design tires in all positions as they are more fuel efficient than using lug tires
- consider using low rolling resistant tires

- choose lighter truck specifications where appropriate. Less vehicle weight means better fuel economy and can also offer more freight capacity increasing income per kilometre traveled
- use accessories such as oil pan heaters and block heaters (to help with cold starting and hasten lubrication), fuel heaters (to prevent fuel gelling), thermostatically controlled engine fans, winter fronts, battery blankets and in-cab auxiliary heaters to improve productivity and fuel efficiency

Caring for your vehicle

Preventative maintenance plays a huge role in maintaining the health and efficiency of your vehicle. When your truck is serviced properly, you can run more efficiently and avoid unexpected downtime. Small problems should be fixed before they become bigger – and more expensive. In addition to regularly scheduled maintenance, you should also:

- ensure your tires are inflated according to the manufacturer's recommendations – one per cent of fuel is wasted for each 10 pounds per square inch of underinflation
- before you hit the road, make sure you've done a pre-trip inspection – not only is it the law but it can also help you avoid unwelcome breakdowns during your travels
- perform a post-trip inspection to spot problems that could delay you next time
- ensure all fluid levels are correct – underfilling and overfilling can both damage your vehicle
- monitor your restriction indicator for signs of the air filter becoming plugged or contaminated

Smart driving practices

Fuel efficiency starts when you turn your engine on. Proper warm-up helps lubricate components and seals reducing wear and leakage. Starting your truck properly can save money on fuel. Keep the following in mind:

- when setting your vehicle in motion make sure you use zero throttle and are in a gear that doesn't need any throttle
- don't pump the throttle of a fuel-injected engine as the amount of fuel required for starting is pre-measured
- let your vehicle warm up for three to five minutes – if the temperature is below 0 degrees Celsius allow it to warm up until it reaches a safer operating temperature. Don't rev it, let it warm up gradually
- warm your vehicle up after the initial idle time by driving gently, don't try to get too much speed out of the engine by pushing the throttle down hard
- use cruise control where appropriate
- reduce your average speed – generally, for every 10 km/h over 90 km/h you use 10 per cent more fuel
- change gears smoothly – shifting professionally will result in about 30 per cent improvement in operating costs

- always use the clutch, failure to do so can wear the gear teeth down in the transmission
- practice progressive shifting. Shifting before you reach the maximum governed RPM reduces equipment wear, decreases noise levels and saves fuel
- run the engine in the highest gear range to keep it in a low rev range
- Use your retarder properly and turn it off when you don't need it – let the terrain work for you

Idling: A special note
Idling a class eight truck engine burns up to four litres of fuel per hour at 900 rpm. Turn off your engine when you stop for any length of time – you will save fuel, reduce maintenance requirements, prolong engine life and prevent unnecessary emissions. If a 10-truck fleet were to cut idling by an hour a day for 260 days, it would save approximately 10,400 litres of fuel ($11,440 at $1.10 per litre). A 100-truck fleet would save $114,400 and a 500-truck fleet $572,000.

For more information about energy management and efficiency, visit the Natural Resources Canada website at: http://oee.nrcan.gc.ca/transportation/business/heavy.cfm.

Be FleetSmart!

Natural Resources Canada Ressources naturelles Canada

Canada

3. Vehicle weights and dimensions

Vehicles are limited in height, width, length and weight by regulations under *The Traffic Safety Act*. The following are only some of the regulations which will provide a professional driver with the basic knowledge required when driving vehicles that carry passengers or goods. The complete applicable Act and regulations should be consulted for interpreting and applying the law in all cases. Provisions are made for the issuing of permits for the movement of vehicles carrying oversize or overweight loads. Regardless of licensing or permits issued, you must obey all posted signs which limit the dimensions or weight of loads on any portion of the highway.

To assist you in avoiding damage to your vehicle and its load, and possible injury to highway users, you must be alert to warning signs. This particularly applies to overheight loads which often strike overhead structures.

Interpretation and application of regulations

The following are some of the interpretations of terms used in *The Vehicle Weight and Dimension Regulations.*

"Act" means *The Traffic Safety Act.*

"A dolly" means a converter dolly that is towed from a single hitch located on the towing vehicle.

"Articulated bus" means a bus:

i) with an articulation point between the passenger-carrying sections of the vehicle;
ii) designed so that movement of passengers between the sections of the vehicle is possible at all times while the bus is operated on a highway.

"A train" means a combination of vehicles composed of a tractor and a semi-trailer towing a full trailer:

i) connected with an "A dolly"; or
ii) without a converter dolly.

"Axle" means an assembly of two or more wheels, which have a common axis of rotation, through which weight is transmitted to a public highway.

"Axle group" means any number of consecutive axles on a vehicle through which weight is;

i) intended to be equally distributed for transmission to a public highway.

"Axle spread" means the distance between the extreme axle centres of an axle group.

"Axle unit" means:

i) a single axle;
ii) a tandem axle group;
iii) a tridem axle group; or
iv) a multiple axle group.

"Box length" means:

i) front of a semi-trailer to its rear, but does not include auxiliary equipment mounted at the front of the semi-trailer; or
ii) the distance from the front of the lead semi-trailer in an "A" train, "B" train or "C" train to the rear of the rear-most vehicle, but does not include auxiliary equipment mounted at the front of the first semi-trailer.

"B-train" means a combination of vehicles composed of a tractor and a semi-trailer towing another semi-trailer attached to a fifth-wheel mounted on the rear of the first semi-trailer.

"Bus" means a motor vehicle designed and intended to carry more than 15 passengers.

"C-dolly" means a converter dolly with two parallel arms which connect to two hitches located on a towing unit so as to prevent any rotation in a horizontal plane through the hitch points.

"Combination of vehicles" means two or more vehicles joined together.

"Combined weight" means the sum of the gross weight for two adjacent axle units.

"Converter dolly" means a device consisting of one or more axles, a fifth-wheel assembly and one or more drawbars used to convert a semi-trailer to a full trailer.

"C-train" means a combination of vehicles composed of a tractor and semi-trailer towing a full trailer connected with a C-dolly.

"Drawbar length" means the distance from the mid-point of the axle unit on a converter dolly to the hitch point on the vehicle towing the trailer.

"End dump semi-trailer" means a semi-trailer designed so that its cargo carrying area may be raised to allow the end dumping of its load.

"Effective overhang" means the distance from the trailer turn centre to the rearmost point, including the load, of a trailer or semi-trailer.

"fifth-wheel" means a coupling device securely attached to the chassis of a vehicle which will accept a semi-trailer kingpin inserted through the device and will lock the kingpin in position to allow rotation in a horizontal plane through the coupling device.

"Farm equipment" means equipment, other than a truck, semi-trailer unit or trailer that is towed by a truck or semi-trailer unit, designed and intended for use in farming operation, but does not include farm equipment that is loaded on a truck trailer or semi-trailer unit, or that is towing equipment other than another piece of farm equipment.

"Full trailer" means a vehicle that is designed to be towed by another vehicle and is designed so that the whole of its weight is carried on its own axles and includes a semi-trailer and a converter dolly hitched together.

"Gross vehicle weight" means the total weight of a vehicle or combination of vehicles, calculated as the sum of the weight transmitted to the surface of a public highway through each of its axles.

"Gross weight" means the weight transmitted to the surface of a public highway through any areas on contact between the roadway surface and any vehicle, object or contrivance.

"Hitch offset" means the distance from the trailer turn centre to the hitch point used to tow a trailer.

"House trailer" means a vehicle drawn by a motor vehicle and designed and intended for use as living quarters or for office space.

"Interaxle spacing" means the distance separating centres of the nearest axles in two adjacent axle units.

"Kingpin setback" means the distance from the centre of the kingpin on a semi-trailer to the most distant point on the trailer or load in front of the kingpin.

"Motor vehicle" means a vehicle propelled by or driven by any means other than by muscular power.

"Multiple axle group" means an axle group of three or more axles with an axle spread of not more than 4.5 m, but does not include a tridem axle group.

"Official highway map" means the map contained in the Appendix to *The Provincial Highway Designation Regulations.*

"Pony trailer" means a vehicle that is:

i) designed and intended to be towed by another vehicle
ii) designed so that most of its weight is carried on its axles; and
iii) equipped with a rigid drawbar, but does not include a house trailer.

"Provincial road" means any public highway shown as a provincial road on the official highway map.

"Road construction equipment" means self-propelled or towed equipment used directly in road construction, but does not include a truck, trailer, semi-trailer or any road construction equipment transported on a truck, trailer or semi-trailer.

"Road maintenance equipment" means self-propelled or towed equipment used directly in road maintenance, but does not include a truck, trailer, semi-trailer or any road maintenance equipment transported on a truck, trailer or semi-trailer.

"Semi-trailer" means a vehicle designed and intended to be towed by another vehicle in a manner that part of the weight of the vehicle being towed rests on and is carried by the towing vehicle by means of a fifth-wheel.

"Single axle" means:

i) any individual axle; or
ii) any combination of two axles whose centres are less than 1 m apart, but does not include any axle within a tandem, tridem or multiple axle group.

"Steering axle" means an articulated lead axle of a motor vehicle which governs the direction travelled by the motor vehicle.

"Tandem axle group" means a group of two axles:

i) whose centres are more than 1.0 m and not more than 1.85 m apart; and
ii) that is not part of a tridem axle or a multiple axle group.

"Tractor" means a motor vehicle designed, and normally used, to pull a semi-trailer (also known as a power-unit).

"Trailer" means a vehicle designed and intended to be towed by a vehicle and used to convey goods.

"Trailer turn centre" means:

i) with respect to a semi-trailer, the geometric centre of the first axle group to the rear of the kingpin; and
ii) with respect to a full trailer that does not consist of a semi-trailer and converter dolly, the geometric centre of the rearmost axle unit.

"Tridem axle group" means a group of three equally spaced axles; none of which is capable of being lifted off the surface of the highway:

i) with an axle spread of not less than 2.4 m and not more than 3.7 m; and
ii) that is not part of a multiple axle group.

"Truck" means a motor vehicle designed and intended for the transport of goods or carrying loads.

"Urban municipality" means an urban municipality as defined by *The Urban Municipality Act* and includes a northern hamlet, northern village or town within the meaning of *The Northern Municipalities Act.*

"Vehicle" means a device in, on or by which a person or thing is, or may be, transported on a highway and includes its load and any equipment which may be towed on a highway.

"Wheelbase" means:

i) the distance from the kingpin to the trailer turn centre on a semi-trailer;
ii) the distance from the centre of the first axle unit to the trailer turn centre on a full trailer, other than a full trailer consisting of a semi-trailer and a converter dolly;
iii) the distance from the centre of the steering axle to the geometric centre of the drive axles on a truck or tractor.

Vehicle dimensions

Subject to certain exemptions for farm equipment, "no person shall, without a permit issued pursuant to *The Highways and Transportation Act*, operate, move or cause to be operated or moved on or over a provincial highway or provincial road," any vehicle, object, contrivance or combination of vehicles which exceed certain prescribed dimensions.

Length

- A single vehicle must not exceed 12.5 m in length;
- A combination of vehicles other than an A, B or C train must not exceed 23 m in length. You may tow more than one trailer. However, towing two trailers behind a car or light pickup increases the problems of stability in towing and braking. To make sure all vehicles are stable, the lead trailer must have at least two axles or be a fifth-wheel or gooseneck tailer. For example, if you are towing a camper and a boat, the camper must have two axles and must tow the boat. Fifth-wheel trailers or trailers with gooseneck hitches do not require two axles. **Note:** Each jurisdiction has its own rules concerning towing more than one trailer. Check other jurisdictions' requirements before you travel there.
- An A, B or C train must not exceed 25 m in length.

Flags

Red flags located on the extremities and along the edges of over-dimension loads are required for travel during daylight hours. These flags warn other traffic of the size and location of over-dimension loads so they can take the necessary precautions when meeting or passing the over-dimension load.

Warning: The driver of a truck which has an "overhang" over the rear axle must exercise caution in narrow roadways and alley-ways when negotiating tight turns. Allowances must be made for the "overhang" to avoid striking objects such as poles, parked cars, buildings, etc.

Width

The maximum legal width, unless otherwise expressed in a permit, for a vehicle and its load on a provincial highway or provincial road is 2.6 m.

A rear vision mirror on the side of a vehicle may extend 20 cm past the width prescribed in the regulations or in a permit.

A tie-down device on the side of a vehicle may extend 10 cm past the width prescribed in the regulations or in a permit.

A tridem axle group or tandem axle group manufactured after June 1988 must not have a width less than 2.5 m measured from outside to outside tires.

A tandem axle group on a semi-trailer manufactured after December 1991 must not have width less than 2.5 m measured from outside to outside tires.

A house trailer being moved between sunrise and sunset shall not exceed a width of 3.05 m.

A building, object or contrivance must not exceed 2.6 m in width.

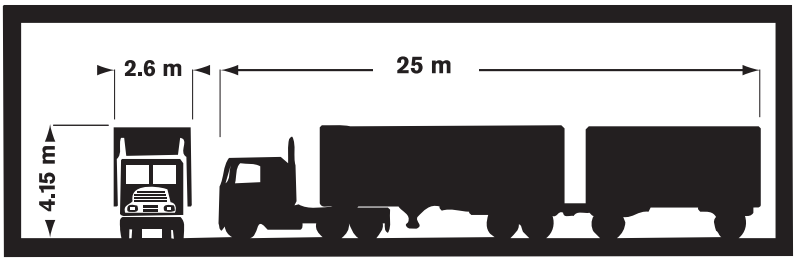
Warning: Caution must be exercised by drivers of overwidth vehicles at narrow bridges, ravines, canyons and road construction areas. Drivers must also be careful that they do not strike signs, light poles or delineators with overwidth vehicles or loads.

Height

The maximum height of a vehicle, building, object or contrivance is 4.15 m unless otherwise expressed in a permit. You must know the total height of your vehicle and load at all times. Special attention should be given for low overhead clearance which may not be posted. A few examples of such hazards are:

- underpasses and tunnels
- fire escapes in alley-ways
- boulevard tree limbs overhanging the roadway
- service station and store canopies
- low wires across residential driveways
- repair shop and warehouse doors

Warning: During winter months, snow buildup on the road surface can reduce overhead clearance.



Overheight

On all provincial highways and provincial roads, a permit is required when the height of your vehicle or load exceeds 4.15 m. Generally, overheight permits are restricted to non-divisible loads and loads deemed impractical to divide.

The overhead clearance on bridges and signs generally determines the maximum height allowable on a permit. However, heights allowed on many permits require that a driver must bypass certain structures that are lower than the height allowed on the permit.

Most power and telephone lines over provincial highways have a minimum clearance of 5.2 m. If the load exceeds this, the operator must check with SaskPower and SaskTel.

Some railway crossings have low overhead telegraph lines and overhead signals. When moving large loads over crossings, proper authorities should be contacted.

Buildings, objects or contrivances

A building, object or contrivance must not exceed 12.5 m in length, 2.6 m in width and 4.15 m in height.

Clearance lights

Clearance lights located at the extremities and along the edges of over-dimension loads are required for travel during the night or in periods of reduced visibility. These lights outline over-dimension loads and provide a warning to other traffic using the highway.

Amber flashing (rotating) lamps

Amber flashing lamps are required on most units carrying over-dimension loads. They must be located on the cab of the vehicle and spaced as widely as possible. These lamps warn oncoming traffic of the presence of an over-dimension load, both during the day and at night.

Farm equipment

Farm equipment exceeding the prescribed dimensions may be towed or driven between sunrise and sunset on or over any public highway other than certain high-traffic volume designated highways.

Farm equipment exceeding the prescribed dimensions may be towed or driven between sunrise and sunset on or over a designated highway except where it extends into the adjacent or opposite traffic lane.

Note: This exemption does not apply to farm machinery or grain bins when loaded on a truck, trailer or semi-trailer.

Weight

Heavy vehicles are licensed in Saskatchewan according to their gross vehicle weight. Weight limits for both axle weights and gross weights are established separately under the Act to protect highways and bridges. All drivers should be aware that these are separate requirements and that they cannot exceed a registered weight or a highway weight limit.

Saskatchewan has established different weight systems for various classes of highways. These are referred to as the Primary Highway System, the Secondary Highway System and the Municipal Highway System. Primary highways allow heavier gross weight limits than secondary highways.

Weight limits

The weight limits for the different highway systems are summarized in the following table:

For the period of March 1 to Nov. 30

	Primary Highway	Secondary Highway	Municipal Highway
Steering axle	5,500 kg	5,500 kg	5,500 kg
Single axle	9,100 kg	8,200 kg	8,200 kg
Tandem axle (3.6-3.7 m spread)	17,000 kg	14,500 kg	14,500 kg
Tridem axle (3.6-3.7 m spread)	24,000 kg	20,000 kg	20,000 kg
Tridem axle (3.0-3.6 m spread)	23,000 kg	20,000 kg	20,000 kg
Tridem axle (2.4-3.0 m spread)	21,000 kg	20,000 kg	20,000 kg

Warning: The maximum weights allowed on public highways and bridges are subject to change. Spring road bans, as designated by the Saskatchewan Ministry of Highways and Infrastructure, usually come into effect sometime in the months of March and April. For further information, contact the Highway Hotline at 1-888-335-7623.

The conscientious, professional driver should stay knowledgeable about current weights by occasionally contacting the Saskatchewan Ministry of Highways and Infrastructure.

Overweight

Overweight permits are restricted to non-divisible loads and loads considered impractical to divide. Overweight permits are subject to certain conditions. Check with the SGI Permit Office.

For more information on weights and dimensions obtain a copy of the *Saskatchewan Truckers' Guide* from any SGI driver examination office or Highway Transport Patrol office.

4. Vehicle condition

Periodic Vehicle Safety Inspection Program

The following vehicle classes are required by regulations to be periodically inspected:

- a power unit or truck registered in Class A, C or D that has a registered gross vehicle weight of 22,000 kg or more
- a vehicle registered in Class PB
- a vehicle registered in Class PC
- a vehicle registered in Class PS
- a vehicle that has a seating capacity of 15 or more passengers
- a vehicle registered in Class TS that:
  - is a semi-trailer with air brakes
  - is a trailer with air brakes pulled in combination with a truck or semi-trailer
  - is also registered as a trailer with air brakes
- a power unit or truck registered in a commercial class that has a registered gross vehicle weight of 4,500 kg or more and that operates in more than one jurisdiction
- a vehicle, registered in any class, that is self-propelled and fuelled by pressurized fuel
- a converter dolly used in a commercial operation
- a first-time registered vehicle

Total loss vehicle

A total loss vehicle operated on a highway must have a valid inspection certificate issued by the administrator after the occurrence that caused it to become a total loss vehicle.

Period of validity

An inspection certificate and decal are valid from the date of inspection for the following periods:

- truck – one year, unless otherwise designated by the administrator
- power unit – six months, unless the administrator has designated the vehicle for an annual inspection, in which case the inspection certificate and decal are valid for one year
- trailer, semi-trailer or converter dolly – one year or as otherwise designated by the administrator
- bus – six months with the exception of a Class PC registered bus that does not travel outside of the province and operates within (or 25 km from) the corporate limits of the address shown on the certificate of registration. For those Class PC registered buses only, it is one year or 60,000 km
- school bus – one year
- total loss vehicle – until it becomes a total loss vehicle again
- pressurized fuel vehicle – five years or as otherwise designated by the administrator
- first-time registered vehicle – until it becomes a first-time registered vehicle again

Inspections are performed at certified Vehicle Safety Inspection Stations by certified mechanics. Each inspection station is identified by a sign bearing a silhouette of the vehicle(s) it is certified to inspect.

All items requiring inspection, the method of inspection and standards used are prescribed by regulation. The program is monitored by safety officers who may re-inspect previously inspected vehicles as well as the operation of the stations.

Vehicles passing inspection are given a certificate which should be carried in the cab (semi-trailers excepted). A decal indicating the month and year the inspection expires is affixed to the left window on power units, right window on buses and school buses, and to the left front corner of semi-trailers. Total loss and first-time registered vehicles are not required to have a decal or to carry a certificate in the vehicles.

Operators should be aware of when their inspection certificate expires and report to an inspection station before the vehicle is due for the next inspection. No person shall operate a vehicle which is required to be inspected and no owner shall allow such vehicle to be operated, unless the vehicle has been inspected and issued a valid inspection certificate.

Should you require any additional information, please call SGI's Vehicle Standards and Inspection at (306) 775-6188 or (306) 775-6194.

Trip inspection standard

Under regulations, all commercial vehicles (trucks/power units registered over 5,000 kg RGVW), and any trailers or semi-trailers they are towing, must be inspected by the driver or a qualified person every 24 hours (when being operated).

Note: there are some exemptions to the regulations. For more information contact the Saskatchewan Ministry of Highways and Infrastructure at (306) 933-5290 or visit the website at www.highways.gov.sk.ca.

Circle check

It's necessary to inspect your vehicle and your equipment, no matter how efficient and thorough the maintenance policy of a company or vehicle owner may be. Even if your vehicle is one which is required by law to be inspected periodically, and carries a valid inspection certificate and decal, you should inspect it. As a driver, you should know which equipment must be inspected before driving. You should inspect your vehicle periodically during a long trip. You must be able to determine if any equipment or component is showing signs of failure or improper operation.

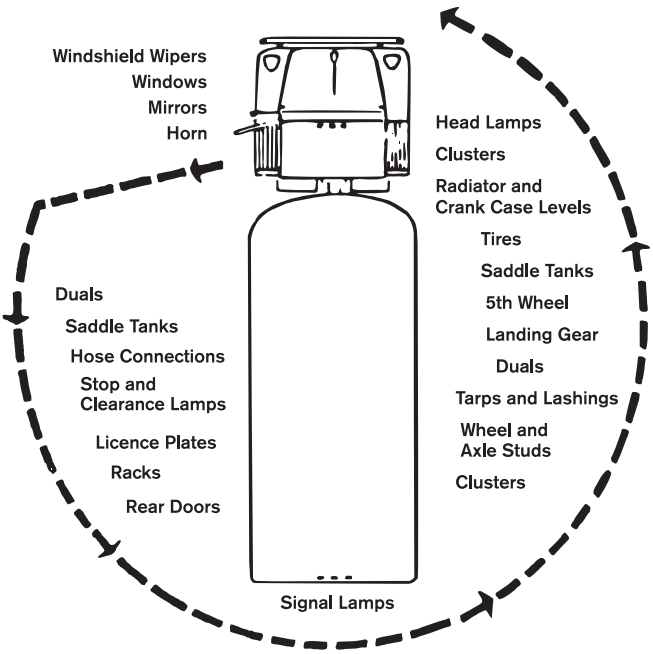
The investment of a few minutes required to check a vehicle before staring out will often prevent you from having costly delays en route, and reduce the risk of accidents resulting from mechanical failure. To carry out an efficient and thorough circle check in a short period of time, follow the systematic check procedures explained in the following pages.

It is an offence to drive, or permit another person to drive, your vehicle on a highway if any vehicle part (or parts of its equipment) is defective or inoperative.

Prior to a road test, an applicant for a Class 1, 2, 3 or 4 licence will be required to perform a circle check on the vehicle in which the road test will be taken. The applicant will be asked to name and point out each item being inspected, as described in the following pages, without any assistance. The circle check described is the minimum type of inspection which is expected prior to a road test. (The school bus circle check is described on page 82.)

The purpose of completing a circle check test is to assess the driver's knowledge of vehicle safety requirements and to check the proper operation and condition of all equipment.

A systematic check for vehicle roadworthiness



The illustration above shows a general method of making a systematic circle check of your vehicle before starting on any trip. Details of the check can, of course, be varied according to the type of vehicle, but the principle of making a complete circle should be followed in all cases. Some of the points to look out for are given in the following sample:

Class 1 to 4 circle check

Ensure the vehicle is secure (parking brake applied or wheels blocked), gear lever is in neutral/park and the ignition is switched off.

Engine compartment – systematic

- Check fluid levels, power steering oil, coolant (do not remove rad cap), batteries, drive belts (tension, wear), cracked or bent fan blades, hoses for leaks, fraying, poor connections, loose electrical connections.

Driving compartment – inside checks systematic

- Driver's seat – seatbelt adjustment, mirror(s) setting
- Start engine, observe ease of starting and function of gauges, warning lamps
- Check operation of hand throttle, accelerator pedal. Check clutch and brake pedal travel
- Steering play, horn, interior lamps
- Heater, defroster, circulation fans (if fitted)
- Emergency equipment and location (if required), inspection decal (if required)
- Windows, windshield, wipers, washers
- Turn on all lamps, operate both signals, four-way hazard lamps
- Observe function of instrument panel indicator lamps
- Turn on left turn signal

Outside checks – systematic

- Check radiator, grill, front bumper, licence plate(s), headlamps, clearance lamps, left front turn signal
- Check left front – tire(s) (for adequate tread depth, cuts or bulges of the sidewall, tread separation and proper inflation), rim(s) (for damage to the tire bead area), lug nuts (for rust around the contact surfaces, indicating looseness or shiny rings, indicating rotation of the lug nut), suspension, left door(s), windows(s) and mirror(s) for security
- Fuel tank brackets – straps, cap (if applicable)
- Check left side marker lamps, reflector (where fitted)
- Check left rear tire(s) – rim(s), lug nuts
- Check left turn signal, licence plate (validity) and lamp, rear lamp(s), clearance lamps, brake lamps
- Tailgate security

Return to the driving compartment, press dimmer switch and turn on the right turn signal then continue with outside check.

- Check front, right turn signal
- Check right front tire(s) – rim(s), lug nuts, suspension, right door(s), window(s), mirror(s) for security
- Fuel tank brackets – straps, cap (if applicable)
- Check right side marker lamps, reflector (where fitted)
- Check right rear tire(s) – rim(s), lug nuts
- Check rear, right turn signal, rear lamp(s), clearance lamps, brake lamps
- Check underneath vehicle for fluid/exhaust leaks
- Check hazard light operation front and rear

Truck/power unit (without trailer)

- Check fifth-wheel attachment to frame, position of locking handle.

Driving compartment – Classes 1-4

- With park brake applied, engage a gear with no increase in rpm, release the clutch pedal until the rpm drops, indicating the park brake is holding. With an automatic transmission the same test can be done by slightly increasing engine speed
- Release park brake, move vehicle forward slowly, depress clutch, apply foot brake to stop vehicle, apply park brake, place gear lever in neutral or park
- Electric breakaway switches to be checked

Power unit with semi-trailer

- Ensure fifth-wheel jaws are closed behind kingpin of semi-trailer. Pintle hook jaw is closed, locked and safety chains attached (full trailer)
- Air brake couplings are correctly fitted. Electrical cord is properly connected. Air brake hoses and electrical cord are properly stowed (to prevent chafing/disconnection). Landing gear/support legs are in the up position
- Check side marker lamps, reflectors, clearance lamps
- Check left side tire(s), rim(s) lug nuts, sliding bogie locking bars/pins
- Check left turn signal, clearance lamps, licence plate validation and light, rear lamps

Note: Open the doors on a container type trailer to check load security (if not bonded/sealed). Return to driving compartment.

- Change to right turn signal, check at the rear
- Check right side tire(s), rim(s), lug nuts, marker lamps, landing gear/support legs are in the up position, handle stowed away
- Check inspection decal validity
- Check right front tire, rim, lug nuts, passenger door and mirror for security

Driving compartment – vacuum-hydraulic or electric brakes

- With brake applied, engage a gear, with no increase in rpm, release the clutch pedal until the rpm drops, indicating the park brake is holding, release park brake, move vehicle forward slowly, depress clutch, apply trailer brakes, release trailer brakes, move vehicle forward slowly, depress clutch pedal and apply foot brake to stop the vehicle, apply park brake, place gear lever in neutral or park. For vehicles with electric brakes remove the pin on the breakaway switch, release the park brake and attempt to move the vehicle forward gently to ensure trailer brakes have activated. Replace pin

Extra equipment

- Load securing devices (twist locks), chains – markings, spare tire security
- Snow chains, tarps, lashings and loose tools are secure

Buses other than school buses

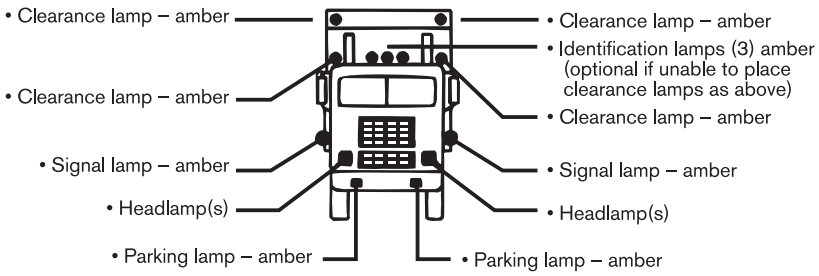
In addition to the circle check, inspect:

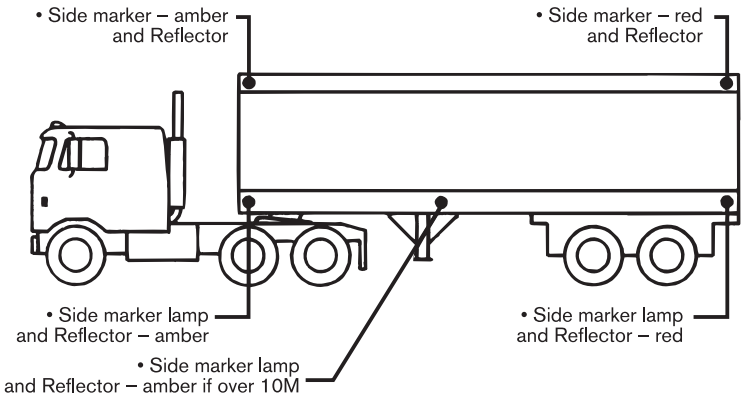
- All interior lamps for operation
- Aisle and stairwell lamps
- All seats and handrails for security
- Operation of emergency door from inside and outside
- Service door control
- Operation of additional heaters
- Interior for loose objects
- Inspection decal for validity

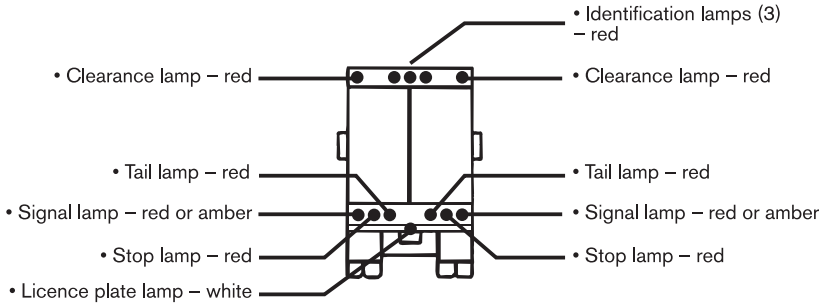
Lighting requirements

Vehicles 2.06 m (80 in.) width or over

- Mandatory







5. Information for Class 1 and Class 3 power units, semi-trailers and trucks

The operation of trucks requires you to develop handling skills in accordance with the characteristics of the vehicle. A knowledge of the turning radius, amount of off-track of the rear wheels, overhang past the rear wheels and width of the vehicle, are important factors you must know to perfect your handling skill.

Steering forward

The degree of sharpness a vehicle will turn depends on two factors: the turning radius of the front wheels and the amount of off-track of the rear wheels.

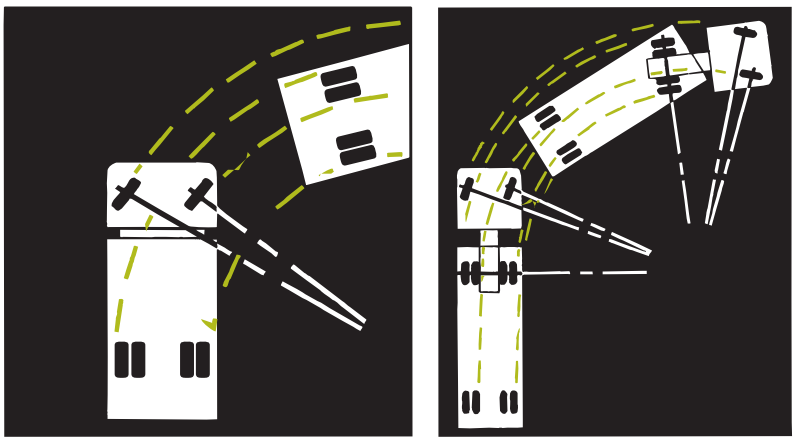
Turning radius

The number of degrees the front wheels will pivot to the left or to the right varies in different makes and types of vehicles. The wheel on the inside of the turn must pivot more sharply to travel on the shorter radius than the wheel on the outside of the turn.

Off-track

The rear wheels of the vehicle do not pivot and therefore will not follow the same path as the front wheels. The greater the distance (wheel base) between the front wheels and the rear wheels of the vehicle, the greater the amount of off-track. The off-track path is a shorter radius than the path of the front wheels.

The combination vehicle, such as a semi-trailer unit, has an off-track of the rear wheels of the tractor unit, and greater off-track again by the rear wheels of the semi-trailer.



The combination unit of a truck-tractor and “pup” trailer has different turning characteristics than those of the semi-trailer type. These units have turning radius and off-track patterns within each unit, but the amount of off-track is dependent upon the length of the draw bar and the wheel base of the units.

On the open highway you must adjust the turning arc of the front wheels in accordance with the sharpness of the curve and the amount of off-track of your vehicle. A curve to the right requires keeping the front wheels close to the centre line to prevent dropping the rear wheels off the pavement shoulders.

A curve to the left requires keeping the front wheels close to the right edge of the pavement to prevent the rear wheel from crossing into the other traffic lane.

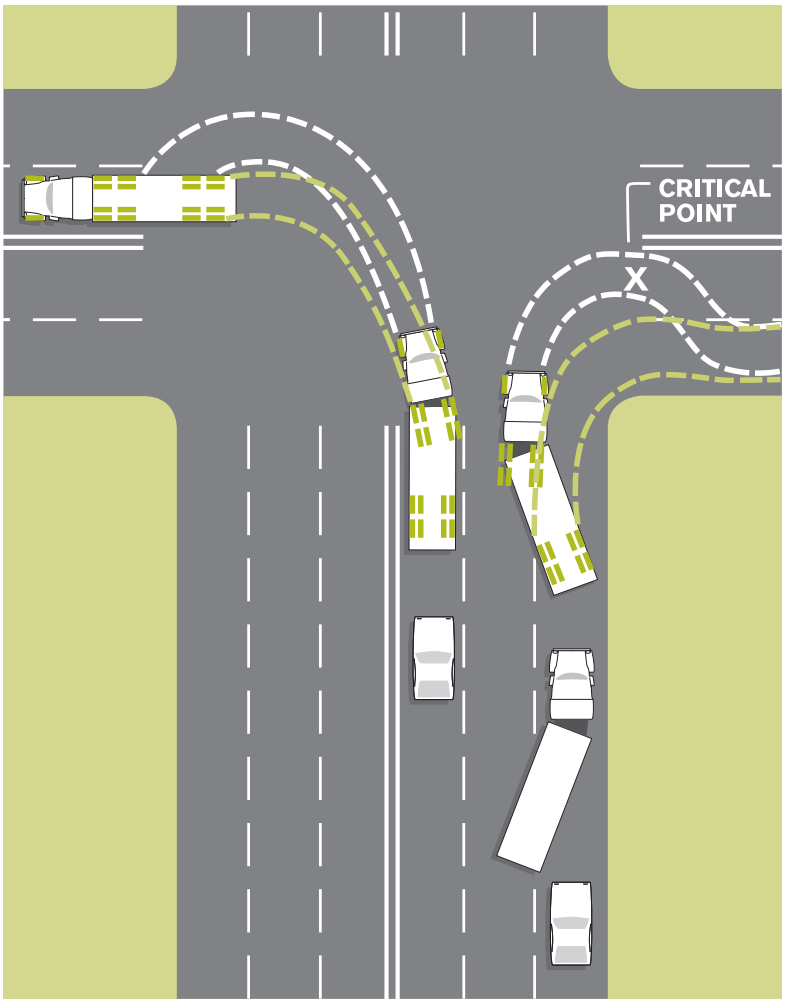
Negotiating narrow bridges which have a curved approach requires the driver of larger units to exercise caution and skill. You must be familiar with the amount of off-track of your vehicle and adjust your speed and approach accordingly.

Turns at intersections

Left turns (see illustration next page)

All left turns must be started from the left lane. The turn should be completed so that the trailer "tracks" from the left lane through the intersection to the left lane on the street you are entering as shown. On narrow streets, it may be necessary to make an "S" turn, or the power-unit will travel over the centre line of the street you are entering or into the second (right) traffic lane. When it is necessary for you to do this, use extreme caution and watch for other traffic to ensure the movement can be made safely. Always ensure that you "block" off any traffic which may attempt to pass on your left, by positioning your trailer within one metre of the centre or dividing curb on the street you are travelling and entering. Continue checking trailer position throughout the turn.

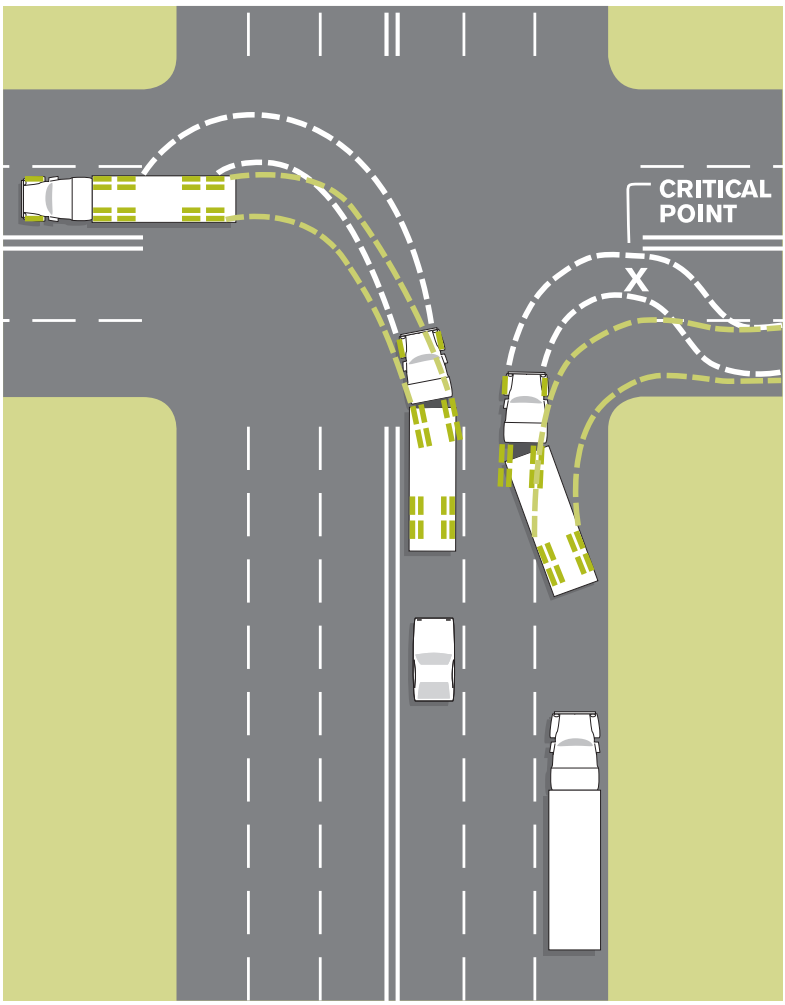
At some intersections, signs or traffic lights indicate two or more lanes may be used to complete a left turn. In these cases it is best to approach and complete the turn in the lane furthest to the right as this allows a wider radius. Use caution if other vehicles are beside you in the left lane.



Right turns (see illustrations this page and next page)
All right turns must be started from the right lane as close to the right side of the street or road as possible and be completed into the first available driving lane. Before starting your turn, you must position the trailer as shown, to “block” off any traffic which may attempt to pass on your right. Where parking is not permitted near the intersection or vehicles are not parked a sufficient distance from the intersection, you must position your unit along the curb before starting the turn.

When making turns at intersections with vehicles which have an appreciable amount of off-track, an “S” turn requires you to adjust your turning arc in accordance to the amount of off-track. Running the rear wheel of the unit over curbings, the centre line or sidewalks, not only causes tire damage but also is hazardous to pedestrians and other traffic. Power poles, sign posts or lamp standards mounted close to the curbing at intersections are fixed object hazards.

When it becomes necessary to “block” off the other traffic lane – for example, an extra long trailer, narrow road or partially blocked street – ensure that smaller vehicles, motorcycles or cyclists are not attempting to proceed on your right or left. The critical point is reached when the tractor is at the sharpest point of the turn in relation to the trailer, as the rear-view mirror vision is limited.



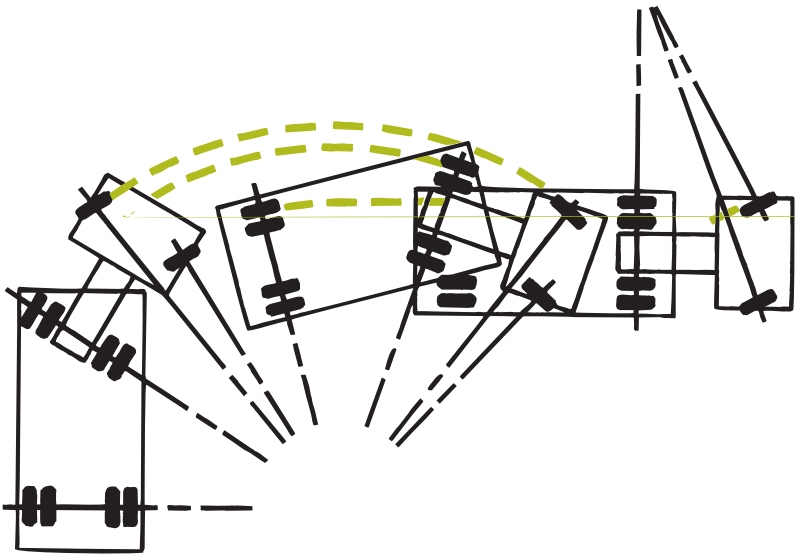
Either of the pictured methods is correct as long as the turn is completed safely.

Steering backward

The control of a single unit vehicle is maintained in the same manner as that of a passenger vehicle.

In backing a tractor with a semi-trailer, the front wheels of the tractor must be turned in a direction opposite to that in which it is desired to move the rear of the trailer.

Depending on the amount of change in direction, the tractor must follow in a track related to the track of the trailer, otherwise a jack-knife position will be reached. The tracking pattern for a normal right angle turn would be an “S” shaped curve.



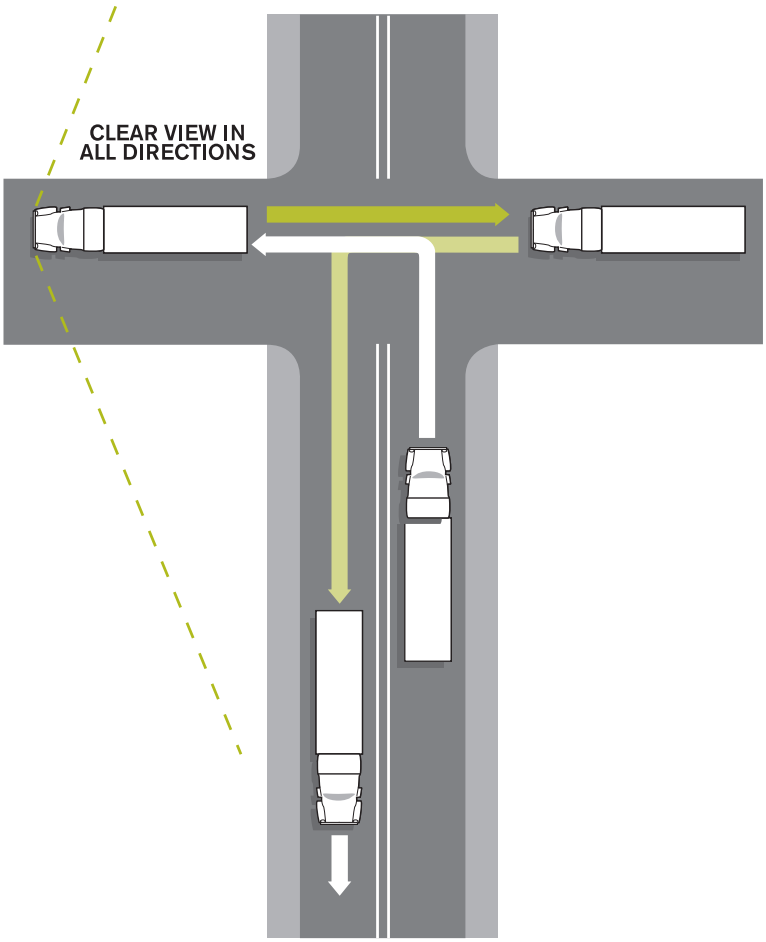
U-turn

In a city, town or village, you should never attempt a U-turn, even on wide four-lane divided streets. It’s preferable that you drive around the block. A U-turn may be made on a wide, divided four-lane highway only if traffic permits.

Highway “turn-about”

When it’s necessary to turn around with a power unit semi-trailer on a two-lane highway, the following procedure is recommended. Use a guide whenever possible.

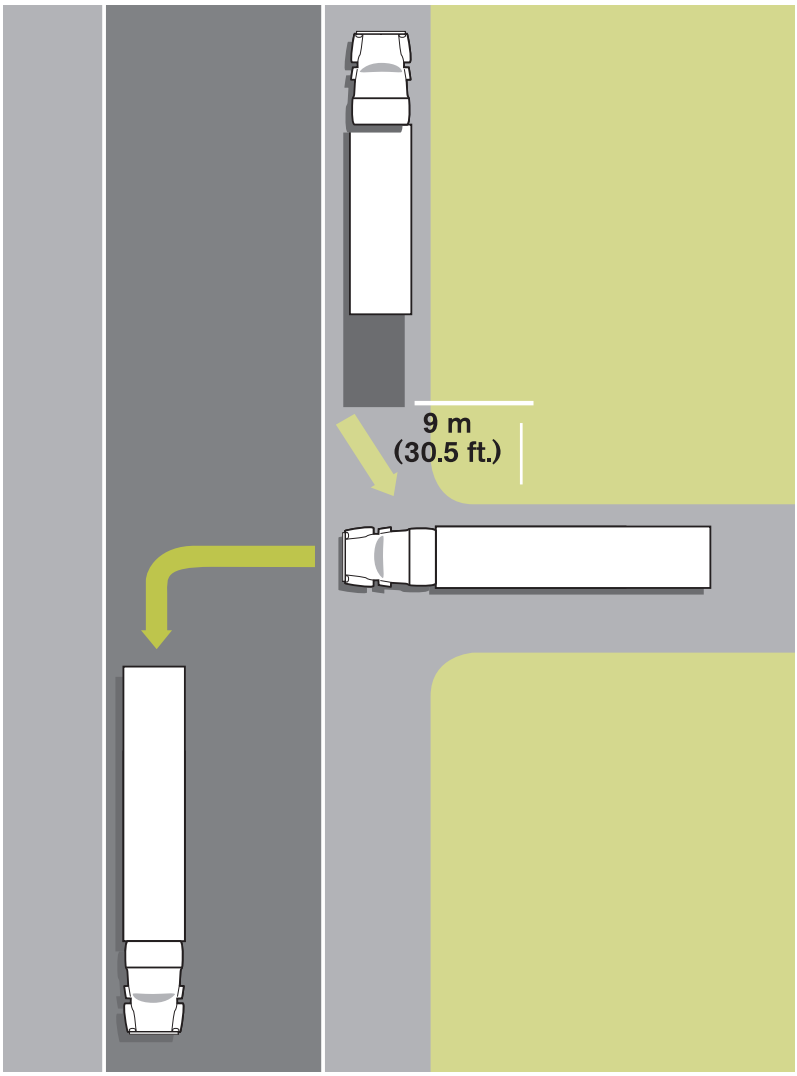
- Choose an intersection where the intersecting highway is built up with a solid base and wide shoulders. Ensure that there is unobstructed visibility in all directions
- Traffic permitting – complete a left or right turn and stop your unit well off the highway
- Check for traffic – when all four directions are clear, proceed to back straight across the highway until you are again clear and well off the main highway
- Traffic permitting, complete a turn onto the main highway



Highway two-point turn

Where it is necessary to turn a power-unit semi-trailer around on a highway where there is no hard surfaced intersection, you may use the following procedure. Use a guide whenever possible because you will be backing to your blind side.

- Well before the place where you wish to turn around, position your vehicle in the right hand lane as close to the edge of the road as possible
- Proceed until the rear of the trailer is at least 9 m (30 ft.) past the intersection and stop. Turn on four-way flashers
- Check for traffic
- Begin backing up slowly. Start turning steering wheel to the left approximately 9 m (30 ft.) before the trailer reaches the approach. Continue backing manoeuvre until the unit is positioned in a straight line on the approach and stop. Turn off four-way flashers
- Check for traffic
- Signal for a left turn, check for traffic again and proceed to make a left turn onto the highway



For single units refer to pages 88-89.

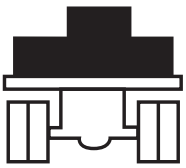
About loads and loading

Weight distribution

The weight distribution of cargo has a definite bearing on the handling characteristics of the vehicle, as well as the life of the tires, frame, springs, axles and bearings.

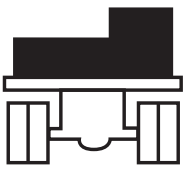
Even though the total load may not be over the total carrying capacity of the vehicles, poor distribution of weight could be overloading an axle or set of tires. Undue stress could be placed on the frame resulting in permanent damage and steering misalignment.

Distribution of weight will depend on the nature of the load. The loading of one piece of cargo which comprises the full load will present different problems from a load made up of a number of pieces of cargo.



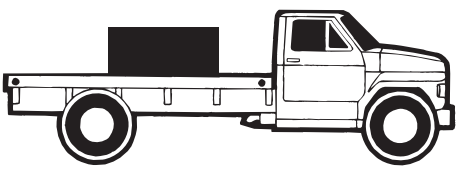
Right

This loading distributes an equal weight on all rear tires and eliminates twisting and stress on the frame. Uniform crosswise loading also prevents axle housing and wheel bearing overloading.



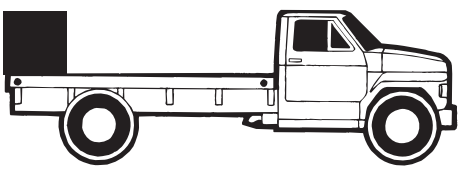
Wrong

A very heavy load should not be loaded on one side. This overloads one spring and the tires on that side. This loading could be bad enough to allow the brakes to lock on the wheels on the light side and cause flat spots on the tires or a skid on a wet surface.



Right

The proper place for the concentrated load illustrated is just ahead of the rear axle with the longest side on the floor.



Wrong

This type of loading never should be permitted. The frame bends, the rear tires are very much overloaded and enough weight is taken from the front tires to make steering almost impossible.

Right

A tractor-trailer combination is the proper vehicle for use in service like this. By using the proper vehicle, damage to the truck and tires, and even serious accidents, may be avoided.

Wrong

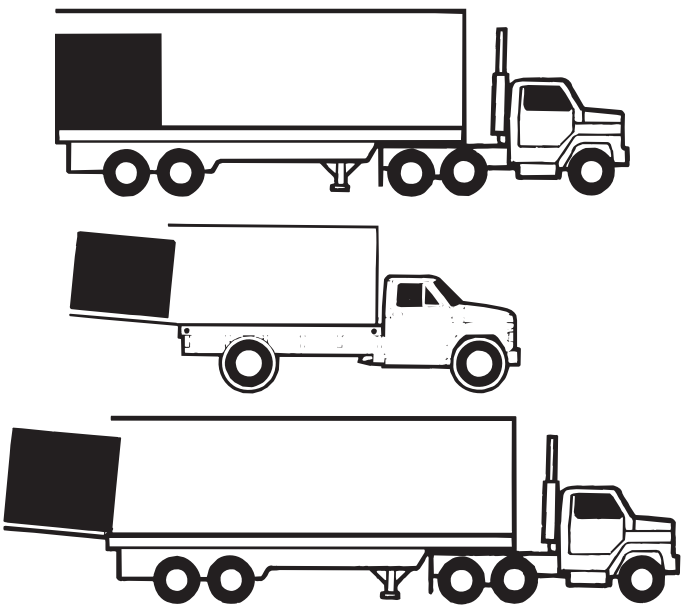
This type of loading results from the use of the wrong vehicle for the job. On rough roads, such loading can result in an actual pivoting of the truck on its rear wheels, taking the front wheels entirely off the road.

Approximate distribution of total weight – vehicle plus payload

Trailers are designed for uniform load distribution, as shown previously. The fundamental difference between loading trailers and trucks is: in the case of trucks, the average design provides for about 90 per cent of the payload on the rear tires and 10 per cent on the front tires. In the case of a trailer, the payload should be distributed equally between the rear tires and the fifth-wheel which transfers its load to the tractor unit.

Wrong

These examples are obviously wrong. In the case of the first trailer, the heavy load at the rear is overloading the rear trailer tires. There is practically no load on the fifth-wheel, and the truck tractor rear tires would certainly slip and wear away rubber. Tailgate loading, of course, should never be practised, even in the interest of speed, as it puts a severe strain on the equipment and frequently results in serious accidents.



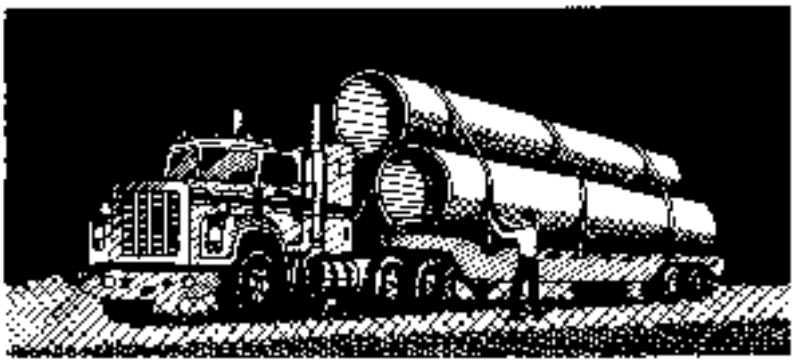
The load should be centred to give the proper wheel load distribution. The average single unit truck has a central weight distribution point midway between the rear of the cab and the tailgate. The average semi-trailer type truck has a central weight distribution point at approximately the middle of the trailer.

Securing loads

As a general rule, both the driver and owner are responsible to ensure that a load does not drop or is not likely to drop on a highway.

Secure the entire load to prevent shifting or loss of any portion of the load. Periodic checks must be made to ensure lashing ropes or binder cables have not become slack or chaffed.

When hauling such loose materials as wood chips, paper, refuse, gravel and stones, etc., you should make certain that no part of the load is dislodged; make sure that you completely cover the load with tarpaulin to prevent dangerous driving situations for those following behind you.



Often the wind velocity is strong enough to force large stones to fly out of open boxes causing them to smash windshields. Stones and other loose materials can cause accidents behind and to the sides. As well, littering is an offence chargeable to the driver and the owner of the vehicle.

Load projections

Check your load and equipment before starting on the road. Extra wide or long loads require special permission for transportation, and such loads must carry the necessary warning signs as covered under the load permit (some widths may be moved during the hours of darkness, provided the permit requirements are met).

Some loads might not exceed the legal length but may overhang the vehicle body. Any overhang must carry a red flag at the end of the load between the hours of sunrise and sunset. The flag must be large enough to be clearly visible from the rear of the vehicle.

During night hours, there must be a visible red light at the extreme rear of the overhang.

Special cargos

A vehicle, whether loaded or empty, that is used primarily for the purpose of transporting any petroleum product or a liquid that is flammable or explosive, shall be brought to a stop at all unprotected railway crossings. The vehicle should stop as far to the right as possible and not less than 5 m (15 ft.) from the nearest rail.

Note: For detailed load security information, please contact your nearest Saskatchewan Ministry of Highways and Infrastructure office.

Livestock

The driver of a vehicle engaged in the transportation of livestock is responsible for ensuring that such transportation is in compliance with the conditions outlined in the Criminal Code, the *Animal Identification Act* concerning registered brands, the *Animal Products Act* and the *Livestock Inspection and Transportation Regulations.* The onus of keeping the vehicle clean and not overcrowded is on the driver.

Cruelty to livestock is prohibited. No person, while transporting livestock or other animals in a motor vehicle, shall:

- by negligence or ill-usage in the transportation thereof, cause or permit any damage or injury to be done to the livestock or other animals;
- transport the livestock or other animals in such a manner or position as to cause unnecessary suffering to any of them by overexposure to heat or cold; or
- transport various classes of livestock unless separated by a partition.

To balance themselves, animals tend to shift back and forth, and to the side while they are standing in a moving vehicle. It is important to take curves carefully, for the sake of the animals as well as the vehicle.

Prohibited shipments

No express transporter shall accept for transportation, or permit to be transported, in or on a public service vehicle that is carrying passengers: any live animal; any acid; any explosive; any flammable substance or material; or any substance, material or article of a kind of quality that is likely to render it disagreeable or dangerous to passengers, or is likely to expose to risk, loss or damage anything being carried in or on the vehicle.

No freight transporter shall store or transport food commodities in premises used for storage of vehicles, livestock, acids or other materials that may, by their nature, render the food commodities unfit for human consumption.

Bills of lading

- A freight transporter shall at the time of acceptance of each shipment of freight for transportation on a public service vehicle issue or cause to be issued a bill of lading

- A bill of lading shall contain at least the following information:
  - the name of the freight transporter
  - the name of the shipper
  - the name of the place at which the freight was accepted for transportation
  - the name of the consignee
  - the name of the place where the freight is to be delivered
  - a list showing the nature of the contents of each container in the shipment and the gross weight of each container and its contents
  - the name and business address of any other freight transporter who will participate in the movement of the freight to its point of delivery

- A bill of lading shall consist of:
  - an original bill to be retained by the shipper
  - a duplicate original of the bill of lading which shall be kept in possession of the driver of the public service vehicle while the freight is being carried thereon
  - a duplicate original of the bill of lading which shall be retained by the shipper if requested by him/her or be delivered to the consignee

Upon demand of a traffic officer, police officer or police constable, the driver shall produce for inspection the duplicate originals of the bills of lading in his/her possession in respect of freight being carried on such vehicle or a freight bill that contains all the information required to be included in a bill of lading pursuant to subsection (2).

Coupling a tractor and trailer

Before coupling the semi-trailer, you should inspect the condition of the kingpin as well as the kingpin plate. Also see that the wheel chocks are firmly in place behind the trailer wheels to prevent the trailer from moving and determine whether or not the trailer has spring brakes.

The trailer is now ready to be coupled:

1. Make sure the fifth-wheel jaw is open and the wheel horns are tilted down.

2. Slowly back the tractor squarely up to the approach plate of the trailer. Do not hit the plate. Set parking brake before leaving the power-unit.

3. Check height of semi-trailer in relation to the fifth-wheel. Adjust the height by use of the trailer landing gear.

4. Check alignment of kingpin and fifth-wheel on tractor.

5.* Connect the light cord and both air hoses to the trailer. Ensure that emergency and service lines are not crossed. Ensure draincocks are closed on air tanks.

6. Check that cargo in trailer is secure, and that no one is inside the trailer or behind it.

7.* Open trailer protection valve to charge trailer with air. Apply trailer brakes using hand control if the truck is not equipped with spring brakes.

8. Release parking brake. Back slowly under the trailer until fifth-wheel engages kingpin.

9. Make sure coupling is secure by pulling tractor ahead slowly but firmly with the trailer brakes set. Do not move trailer as this may cause damage to the landing gear.

10. Apply parking brake and release hand valve.

11. Visually check to see that the jaws of the fifth-wheel are properly locked and around the kingpin, and the safety lock is in position.

12. Wind up landing gear fully replacing handle in the stowage bracket.

13. Check trailer sliding tandem to ensure lock pins are in position.

14. Check to ensure tractor sliding fifth-wheel locking device is secure.

15. Remove wheel blocks.

*If the trailer is equipped with spring brakes, the air hoses may be connected after step 10.

Uncoupling a tractor and trailer

1. Whenever possible, park a semi-trailer on a level area in such a way that the units can be uncoupled in a straight line.

2. Apply the parking brake.

3. Block wheels of trailer to prevent it from rolling.

4. Wind down landing gear.

5. Release fifth-wheel locking handle.

6. Disconnect light cord.

7. Pull forward slowly with trailer brakes applied until tractor is clear of semi-trailer.

8.* Apply tractor brakes, close trailer protection valve, uncouple air brake hoses.

*If the trailer is equipped with spring brakes, the air hoses may be disconnected during step 6.

"Train" or "pup-train"

To handle increased weights allowable under axle weight loading, many trucking operations have gone to the "train" or "pup-train" vehicle combination. In this type of combination, another trailer is pulled behind the regular tractor-trailer by means of a "converter dolly."

Drivers on train operation will discover that new skills are required for safe operation as well as an understanding of the equipment operation and hook-up. More than ever, you must be ready to adjust for changing conditions well ahead of time in order to take defensive or appropriate action to avoid trouble.

Power should always be applied when pulling on a straight stretch while underway (a steady pull, as opposed to intermittent application and reduction of power) with a small amount of reserve power always available. In the event that the rear trailer starts to fishtail or whip, apply trailer brakes lightly and increase power.

Drivers in "train" operations, as well as those driving semi-trailers, should avoid sudden lane changes or turns and speeds too fast for conditions as these actions can result in severe whipping or possible jack-knife situations.

Regular vehicle checks should be made of the complete unit, paying particular attention to the hook-up of the rear trailer, including:

- the hitch on the rear of the lead trailer
- the safety catch on the hook
- the safety chains or cables.
- airlines between the trailers are secured and not allowed to sag down too low.

Hooking up a “train” or “pup-train”

1. Park the rear trailer and set trailer brakes.

2 Position the dolly converter in front of the rear trailer so that it is in line with the kingpin.

3. Hook up the tractor and lead trailer.

4. Back the tractor and lead trailer in line with and up to the converter dolly.

5. Before hooking up to the converter, a thorough trailer hitch inspection should be made. Watch for cracks or breaks in the weld, loose bolts, weak lock springs and bent or distorted cross-members where the trailer hook is attached.

6. Hook and secure the converter dolly tongue to the pintle hook by hand. Fasten safety latch and chain. Ensure that the safety pin is fastened (if so equipped). This is extremely important! This action will ensure the high degree of safety the trucking industry maintains, not only for themselves, but for other users of highways as well. “Train-drivers” should make a point of checking the safety latch on the trailer hitch each time they stop for a vehicle check.

7. Safety chains and cables should be inspected before being attached. When fastened to the lead trailer, they should be crossed so that if the converter dolly tongue breaks loose, it will be held suspended off the roadway while the driver attempts a safe stop.

8. Connect the air hoses between the two units, ensuring that all air lines, especially on the converter dolly, are well secured and not sagging too low.

Some companies that operate equipment with brakes on the converter dollies have applied coloured tape to the air lines in order to identify the service and emergency lines, thereby eliminating the possibility of improper hook-up.

Connecting vehicles

Draw-bars or coupling devices must be in accordance with legislation. These devices should be of sufficient strength to hold the vehicles together and be fastened to integral parts of the frames of the vehicles: you should not draw or tow a trailer or special mobile machine unless the attachment for connecting the draw-bar of the trailer or special mobile machine to the motor vehicle is firmly and directly affixed to the frame of the vehicle.

When a coupling device is used (other than the fifth-wheel coupler of a semi-trailer unit), an auxiliary chain or metal cable of equal strength to the coupling device should also be used.

Except for a motor vehicle pulling a pole trailer, the draw-bar or other connection between the motor vehicle and the trailer should not exceed 1.83 m (6 ft.) in length.

Swerving and whipping – the trailer must not swerve or whip unreasonably when being towed by a motor vehicle.

If the trailer whips or swerves, slow down and stop to determine the cause.

Note: All trailers equipped with brakes must have a device to apply the brakes automatically if the unit should become disconnected.

6. Information for Class 2 and Class 4 – passenger carrying vehicles

The prime consideration of the professional driver is the safe operation of the vehicle. This must take precedence over schedules or any other factors that might contribute to a less than safe operation.

In addition to your own safety, as a professional driver operating a Class 2 or Class 4 vehicle, you must be considerate of the safety and comfort of your passengers by completing a circle check as illustrated on page 51.

The safe and efficient transportation of people is a task which requires a high degree of driving skill. You should at all times be aware of the traffic around the bus to prevent panic stops or sudden swerves.

When approaching a loading zone, the speed should be such that a slow smooth stop can be made. The doors should remain closed until the bus has come to a full stop. The bus should be brought as close to the curb or loading zone as possible.

Before starting, you must be certain the doors are closed properly. The bus is then accelerated smoothly, picking up speed gradually.

The operation of buses requires you to develop handling skills in accordance with the characteristics of the vehicle. A knowledge of the turning radius, amount of off-track of the rear wheels, overhang past the rear wheels and width of the vehicle are important factors you must know to perfect your handling skill.

Many passenger accidents have been attributed to:
- Being improperly parked at a loading zone
- Picking up or discharging passengers when unsafe to do so
- Sudden stops or starts with standing passengers
- Sharp turns at excessive speed
- Improper operation of bus doors

Accidents of these types are the result of improper operations by the driver and are **preventable**.

Every vehicle used for conveying passengers shall have at least two exits.

Right turns

When making a right turn, the driver must avoid running over or scuffing the curbing with the rear wheels. The sharpness of the turn depends on the wheelbase.

When executing a sharp turn to the right (particularly with a forward control vehicle) position the bus 1 to 1.5 m (3 to 5 ft.) out from the curb as you approach the intersection. Ensure by checking your mirror that you "block" off any vehicle which may attempt to pass on the right. Proceed straight until you can see the curb line of the side street through the front entrance door (as shown in the diagram).

Entering the turn at a low speed requires less turning speed of the steering wheel, making a smoother turn with less exertion by the driver.

Right turns into very narrow streets may require that you proceed into the intersection before commencing the turn. It may be necessary to travel over the centre line as the turn is made. When such movement is necessary, you must use extreme caution, and ensure that the movement can be made in safety.

Left turns

Turning a large vehicle requires more attention and care than turning a passenger car. All left turns with buses, as with other vehicles, must be started in the left lane as close to the centre line or dividing curb as possible. With the bus positioned approximately 1 m (3 ft.) from the centre line or curb, proceed straight until the intersecting curb line can be seen through the front left window. Complete the turn as near as possible into the left lane of the street you are entering. Narrow intersecting streets may require that you proceed straight ahead over the centre of the intersection before the turn can be started. When this movement is necessary, you must use caution, using your mirrors to ensure the movement can be made safely.

Left turns – one-way streets

Left turns from a one-way street into a one-way street will require that you adjust the turning arc in a similar manner as in the right hand turn, to avoid running over or scuffing the curbing with the left rear wheels.

Leaving the curb

You should not rely solely on the side mirror to check if the traffic is clear before pulling out. You should also glance over your left shoulder to verify the way is safe.

Leaving the curb with a bus will require a signal be given by means of the signal lamps, but you should not use the turn signal until you are prepared to proceed from the curb.

Leaving the curb with a bus which has an overhang over the rear wheels requires you to use caution to avoid striking pedestrians, poles or sign posts which are located close to the curbing. Cars parked close to the front of the bus and vehicles approaching in the opposite direction are factors which you must assess before moving your vehicle.

Parked cars

Passing parked cars requires you to be constantly alert for hazards: cars pulling out without warning, sudden opening of doors on the traffic side or pedestrians stepping out from between cars.

Watch for warning clues:

- Front wheels turned out
- Driver sitting behind the wheel
- Exhaust from tail pipes
- Brake lights

Precautions

The laws governing the operation of a motor vehicle must be carefully observed so that **every** good driving practice and safety rule is followed.

- Backing a bus should be undertaken with the utmost care and caution. The driver should use the rear-view mirror and, if possible, turn and look back and have someone direct him/her. A professional driver backs slowly and cautiously and watches traffic conditions around the vehicle at all times. Backing should, however, be avoided wherever possible
- Adverse weather conditions require adjustments to driving procedures. Every driver should exercise an exceptional degree of care and prudence during adverse weather conditions
- A driver must adjust his/her speed to meet conditions. Additional hazards, such as narrow roads, sharp turns, narrow bridges, rough roads and severe dust conditions must be anticipated, recognized and safely met
- No passenger should be allowed to occupy any position that would interfere with the vision of the bus driver to the front, sides or rear
- The driver should not leave the bus without first stopping the engine and removing the ignition key, setting the brakes and putting the transmission in its lowest gear
- All doors should be tightly closed whenever the bus is in motion
- The bus should be heated and ventilated properly
- At no time should the bus be loaded beyond its licensed capacity

- Buses carrying passengers must stop as far to the right as possible and at a recommended distance of not less than 5 m (15 ft.) from the nearest rail, at all uncontrolled railway crossings. These are railway crossings where no automatic signals or flagperson is stationed. The driver should make note of the number of railway tracks and, before proceeding, make sure that no trains are approaching from either direction
- When stopped at railway crossings the driver should open the door of the bus and listen for approaching trains
- The driver should avoid situations that require quick stops. Stopping and starting a bus should be a gradual and smooth operation
- The driver must not permit any unauthorized person to occupy the driver's seat or to operate the bus or any of its controls
- A driver of a passenger vehicle shall not collect fares, or take on or discharge passengers while the vehicle is in motion, nor may he/she engage in unnecessary conversation with passengers while driving the vehicle

Driver's vision

When driving, your view ahead and to the sides must not be obscured in any way. You must also have full movement of your arms and legs, and have ready access to emergency equipment at all times.

No passenger may sit to your left when you are driving. In the case of a sedan-type vehicle, a maximum of two passengers (in addition to the driver) may be seated on the front seat only if there is adequate room for the driver to operate the vehicle safely.

Standing passengers

Standing is prohibited on public service vehicles other than a local transit vehicle.

Passengers are not allowed to ride on the running boards, fenders or any part of the vehicle other than the seats.

Drivers of local transit vehicles should not permit passengers to stand to their right, so as to obstruct their view.

Refusal to transport passengers

No person may be refused passage on a public passenger vehicle when he/she presents himself/herself at any regularly scheduled stopping-place and tenders the legal fare, unless at the time the vehicle is carrying the maximum authorized number of passengers.

Passage may be refused to someone who is intoxicated, disorderly or who is using profane language.

Emergency Vehicles

As the name implies, an emergency vehicle is operated under conditions and circumstances of danger to life and property. The ordinary rules of the road, traffic signs and signals that apply to other traffic are suspended while the vehicle is being driven in response to a call for help, or to apprehend a person suspected of having committed a serious crime and only when continually sounding the siren and flashing lights. While such rules may be waived to provide a swift response to an emergency, the law does impose an obligation on all drivers of emergency vehicles to exercise due care for the safety of other persons. To save the life of one person while endangering the lives of others is a trade-off society is not prepared to accept. Under no circumstances should a driver of an emergency vehicle take advantage of the law when not responding to an emergency.

Drivers of emergency vehicles provide a service to their community which sometimes goes unrecognized and is beyond monetary calculation. The skills, foresight and judgment required to operate such vehicles, often under extremely hazardous conditions, and where a speedy response is vital, is far above that required of other types of drivers.

The following are some of the rules and good driving practices of which you should be aware.

An emergency vehicle is any vehicle that is used for any one of the following purposes:

- police duty
- firefighting, including a fire pumper operated under authority of a municipality
- ambulance

Duties of other drivers

The law requires that drivers of other vehicles give the right-of-way to an emergency vehicle which is displaying flashing lights and is sounding a siren or other warning device. Such drivers are obligated to drive parallel to the right-hand side of the roadway, as close to the edge as circumstances permit and, where the vehicle is within an intersection, to clear the intersection and stop on the other side **until the emergency vehicle has passed.**

These laws were passed to assist operators of emergency vehicles to carry out their responsibilities with a minimum of delay. However, you should not presume that all drivers will comply with the law at all times.

Sometimes, a driver has difficulty in identifying the direction from which an emergency vehicle is approaching, particularly at intersections, and may inadvertently drive into your path. At other times, particularly during cold weather when all windows are closed, drivers have difficulty in hearing the siren and may not react as quickly as they might under more favourable conditions.

When approaching an emergency vehicle stopped on the highway with its emergency lights flashing, drivers must slow to 60 km/h when passing unless the emergency vehicle is on the opposite side of a divided highway.

When roads and traffic conditions are severe, extra care is required. It is far better to take a few extra minutes to arrive at your destination safely than to be delayed by an accident.

Recovery vehicles (tow trucks)

Flashing lamps should be used only when the recovery vehicle, or the vehicle in repair or tow is creating a hazard or obstruction on the highway. When in tow, temporary tail, brake and signal lamps shall be at the rear of the vehicle in tow.

Notwithstanding the vehicle being equipped with flashing lamps, the driver is not granted any special privileges and must respect all right-of-way rules and other provisions.

You should remove derelict or damaged vehicles from the highways so that they do not obstruct the free passage of other vehicles. You should also clean up any debris that may be laying on the highway as the result of a collision.

Extreme caution should be used if a tow line is required to be stretched across a highway. Serious accidents have resulted where precautions have not been taken or a flagperson not posted.

When towing another vehicle, such as a power unit semi-trailer, where the overall length exceeds the maximum allowable length, the driver must obtain a permit.

When approaching a tow truck or service vehicle stopped on the highway with its amber lights flashing to render assistance to a disabled vehicle, drivers must slow to 60 km/h when passing unless the truck is on the opposite side of a divided highway.

Taxis

The operation of a taxi is unique. Unlike any other vehicle, the driver is constantly exposed to the risk of collision. Generally, taxis operate 24 hours a day in high traffic density areas. The average number of kilometers travelled by a taxi driver in the course of one year is approximately 64,000, or nearly four times the average distance driven by drivers of passenger cars.

Taxi drivers have to contend with many problems. In addition to operating their vehicle in continuous traffic, most taxis are equipped with two-way radios and meters which create distractions when driving.

Taxi drivers are:

- sometimes called to attend emergency situations
- urged by their passengers to hurry in order to catch a plane or to attend a meeting for which the passenger may be late
- exposed to and have to cope with unruly and sometimes intoxicated passengers

The resulting pressures require taxi drivers to have a high degree of skill in the operation of their vehicles and to have a thorough knowledge of the street systems so that they can plan their destination routes quickly.

Examination of the driving records of taxi drivers shows two things:

1. Some taxi drivers have an exceedingly high incidence of collisions. This is attributable, in part, to the high exposure rate mentioned earlier.

2. A more disturbing aspect reveals that taxi drivers are frequently charged and convicted for speeding and failing to obey traffic control devices.

While the higher involvement rate in collisions may be somewhat understandable, it is difficult to justify why some taxi drivers commit these offences with such frequency, causing them to lose, at times, their driver's licence and their job.

Studies have shown that it is virtually impossible to pick up time in heavy traffic areas. Experiments carried out in other cities have shown that the time saved by a driver driving as fast as traffic conditions allow and disregarding other regulations, compared to a driver driving within the speed limit and observing all traffic rules, is a matter of a few minutes, scarcely worth the increased collision risk or the possibility of getting a traffic ticket.

In addition to holding a Class 4 licence, a person wishing to operate a taxi must obtain a Certificate of Good Moral Character/Police Approval.

Suggested practice for taxi drivers

It is a good practice to check the condition of your vehicle before taking it out for a day's work. If you detect any defects or inoperative equipment, you shouldn't take the vehicle out until the defect or inoperative equipment has been repaired. During the working day, if you detect any malfunction in the safety equipment, advise your dispatcher of the nature of the defect. The vehicle should be taken in for repairs as soon as possible; if the defect is serious, you should not attempt to drive the vehicle. Have it towed instead.

7. School buses

Becoming a school bus driver

To become a school bus driver you must be at least 18 years old and have a valid Class 1, 2, 3, 4 or 5 licence, and not be a novice driver (see pages 9-10). You must also pass a medical and school bus examination and obtain a valid school bus "S" endorsement.

The minimum requirement to drive a school bus is a Class 5 licence. This allows you to drive a school bus with no passengers. If the school bus is equipped with air brakes, you must have the air brake endorsement "A" specified on your licence.

School bus driver "S" endorsement card

If you successfully complete the school bus examinations, you will receive a copy of your road test scoresheet. Based on this document any SGI motor licence issuer can add the "S" endorsement to your driver's licence.

The "S" endorsement must be renewed every five years. Renewal is your responsibility. A reminder letter will be sent out to you.

To renew your "S" endorsement, you must have a current satisfactory medical examination on file with SGI and repeat all the school bus examinations before the expiry date of your endorsement.

Vehicle checks and maintenance

With the lives of so many students in their hands, school bus drivers have certain responsibilities to the Saskatchewan Ministry of Education, local school boards, principals, parents and students. Therefore, it is essential that every school bus is in serviceable condition at all times. Regular vehicle checks and maintenance, as required by current regulations, will keep the bus in good condition.

Safety is the most important and obvious reason for a daily circle check. It lets you know your vehicle is safe. This check is your responsibility.

Daily circle check

1. Ensure the vehicle is secure (parking brake applied or wheels blocked), gear lever is in neutral/park and the ignition is switched off.

2. Open the hood. Check fluid levels, power steering oil, coolant (do not remove rad cap), batteries, drive belts (tension, wear), cracked or bent fan blades, hoses for leaks, fraying, poor connections, loose electrical connections.

3. Enter the bus. Adjust the driver's seat so that you can comfortably reach all the controls, then put the seatbelt on and adjust it properly. From your sitting position, look into the interior and exterior mirrors. Adjust the mirrors for maximum side and rear view vision.

4. Start the engine, noting ease of starting. Listen for unusual noises and check that warning lamps go out and oil pressure and charging rate are normal. If the vehicle is equipped with a coolant temperature gauge, ensure that the reading is normal.

5. Check the operation of the clutch (if fitted) and the brake pedal for excess travel and sponginess (vacuum brakes only). Make sure the accelerator pedal is not binding and that the engine returns to idle rpm after being accelerated. Check operation of the hand throttle (where fitted).

6. To check for excessive steering play, turn the steering wheel to the left and right until you feel resistance. Press the horn button. The horn must be audible under normal conditions. Check operation of the service door.

7. Turn on the interior lamplkSnS.TeSkSirdSes,TYele(sSaftgngTdS,TYecirculper

13. Leave the bus and begin at the front of the bus.
    Outside checks – systematic
    - Check radiator, grill, front bumper, headlamps, clearance lamps, left front turn signal. Ensure that the engine hood is secure and the licence plate is valid and clean
    - Check left front tire(s) – (for adequate tread depth, cuts or bulges of the sidewall, tread separation and proper inflation), rim(s) (for damage to the tire bead area), lug nuts (for rust around the contact surfaces, indicating looseness, or shiny rings, indicating rotation of the lug nut), suspension, left door(s), windows(s) and mirror(s) for security
    - Fuel tank brackets – straps, cap (if applicable)
    - Check left side marker lamps, reflector (where fitted)
    - Check left rear tire(s) – rim(s), lug nuts
    - Check left turn signal, licence plate (validity) and lamp, rear lamp(s), clearance lamps, brake lamps
    - Tailgate security

    Return to the driving compartment, press dimmer switch and turn on the right turn signal then continue with outside check.
    - Check front, right turn signal
    - Check right front tire(s) – rim(s), lug nuts, suspension, right door(s), window(s), mirror(s) for security
    - Fuel tank brackets – straps, cap (if applicable)
    - Check right side marker lamps, reflector (where fitted)
    - Check right rear tire(s) – rim(s), lug nuts
    - Check rear, right turn signal, rear lamp(s), clearance lamps, brake lamps
    - Check underneath vehicle for fluid/exhaust leaks

14. At the rear of the bus, the licence plate lamp should work and the licence plate should be valid and clean. Open the rear emergency exit door to check for smooth operation, the audible warning buzzer and latch security.

15. At the rear of the bus, the exhaust tail-pipe should be properly secured to the frame and chassis and should not leak.

16. Check driver's door to ensure that the lock and latches work properly. If possible, observe that the exhaust system is secure, properly suspended and not leaking.

17. Return to driving compartment. Cancel the right turn signal, activate the four-way hazard lamps and check that they are operational at the front and rear of the vehicle. To check brake lamps, have someone assist you, or if this is not possible, use a wedge between the seat and the brake pedal to lightly apply the brake lamps. Select a gear or drive and, at idle rpm, release the clutch (if fitted) until the rpm drops, which indicates the park brake is holding. Release the park brake, move the vehicle forward slowly, depress the clutch pedal and apply the foot brake to stop the vehicle noting any tendency for the vehicle to pull to the left or right or for the brake to grab.

18. The school bus loading and unloading safety lamps, stop arm and strobe lamp function should always be checked while the vehicle is off the public highway.

Routine checks

Cleaning the bus is important. For safety's sake, the vehicle must be maintained at all times.

On a weekly basis, or more often if required, you should perform the following duties:

- clean the floors and steps
- clean the interior and exterior mirrors
- clean the windows, inside and out
- clean the seat
- clean the exterior of the bus
- repair minor defects that you have come across on daily checks

Emergency equipment

By regulation, each school bus must be equipped at all times with certain emergency equipment. This equipment includes:

- three flares (reflectors)
- fire extinguisher (located where it can easily be reached by the driver)
- first aid kit (Car Behind Kit, CSA Kit or equivalent for all registered school buses)

Trip inspection standard – school buses

Under regulations, school buses, (designed and constructed to have a seating capacity, including the driver, or more than 10 people), are included in the definition of "commercial vehicle" and therefore must be inspected by the driver or qualified person every 24 hours (when being operated). The carrier must supply a list of inspection items, as per Schedule 2 of the regulations), to the person doing the inspection. Schedule 2 identifies **minor** and **major** defects in each inspection item type. The list must be carried in the vehicle and presented to a peace officer on request.

Items that must be checked during each inspection are as follows;

- accessibility devices
- air brake system (if applicable)
- cab
- cargo securement
- coupling devices
- dangerous goods (if any)
- doors and emergency exits
- driver controls
- driver seat
- electric brake system (if applicable)
- emergency equipment and safety devices
- exhaust system
- exterior body and frame
- fuel system
- general defects
- glass and mirrors
- heater/defroster
- horn
- hydraulic brake system (if applicable)
- lamps and reflectors
- passenger compartment
- steering
- suspension system
- tires
- wheels, hubs and fasteners
- windshield wiper/washer

The inspection must be recorded on an inspection report that must be carried in the vehicle and produced for inspection on request of a peace officer. The report form is not prescribed in regulation however must contain the following information;

- Licence plate or unit number of the vehicle
- Carrier's name
- Date and time of inspection
- City, town, village or highway location where the inspection was performed
- A statement signed by the person conducting the inspection and by the person driving the vehicle (if different than the person inspecting the vehicle) that the vehicle identified on the report has (have) been inspected in accordance with the applicable requirements
- The legible printed name of the person conducting the inspection; and
- Odometer reading (if equipped)

When defects are detected they must be noted on the inspection report and reported to the carrier forthwith. Minor defects **must** be repaired before the next trip inspection. **If major defects are encountered the school bus must not be driven until the defects are repaired**.

Drivers are required to forward copies of their trip inspection reports to the carrier every 20 days and carriers are required to keep the reports on file for six months.

The Security of Loads and Trip Inspection Regulations are available from the Saskatchewan Queen's Printer website at http://www.qp.gov.sk.ca/. For more information contact the Saskatchewan Ministry of Highways and Infrastructure at (306) 933-5290.

Annual vehicle inspection

The school bus safety inspection program is administered by SGI's Vehicle Standards and Inspection department. This unit certifies vehicle inspection stations and the mechanics who perform maintenance operations on your school bus. A complete vehicle safety inspection must be made at a certified school bus inspection station once every year.

Following a passed inspection, you will receive a safety inspection certificate that shall be placed in the School Bus Log. The safety of your school bus is your responsibility. You should report all items requiring repair to the proper authorities.

School bus driver regulations

1. A school bus driver **must not:**
    - consume alcohol in the eight-hour period immediately before driving a bus
    - operate a bus unless it is clean and sanitary
    - leave a bus that contains passengers unless:
        - the bus has an interlock system or a device that prevents the bus from being moved or operated by anyone other than the driver and the driver has activated that system or device
        - the driver has turned off the engine of the bus, removed the ignition key and engaged the parking brake
    - operate a bus unless its headlamps and taillamps are activated
    - operate the bus until all passengers are seated in a seat designated for the purposes of transporting passengers
    - back up on school grounds except with the direction of a responsible person who is positioned in such a manner that the driver can see that the bus can be safely backed up
    - transport firearms, explosives or other dangerous items
    - enter a provincial highway without:
        - stopping the bus not less than four and not more than 10 m from the travelled portion of the provincial highway
        - making sure it is safe to proceed

      (Where a provincial highway passes through a town with a population over 1,000, it is not deemed to be a highway within the town limits.)
    - activate the safety lights unless the bus is stopped or in the process of stopping to load or unload the passengers
    - activate the stop arm unless the bus is stopped for the purpose of loading or unloading passengers

2. Every school bus driver **shall:**
    - activate safety lights, except where prohibited by law, before stopping to load or unload passengers:
        - at least 100 m before stopping on a highway with a speed limit over 50 km/h
        - at least 25 m before stopping on a highway with a speed limit of 50 km/h or less

- activate the strobe lights on the bus any time the driver is transporting passengers outside a city, town or village
- except where prohibited by municipal bylaw, activate the stop arm when the bus is stopped for the purpose of loading or unloading passengers
- maintain control, and report any misconduct of, passengers to the principal or officials of the school
- when loading or unloading passengers:
  - exercise due caution
  - on a highway move the bus as far to the right as is practical
  - at a school on any street that allows traffic in both directions, stop on the side of the street nearest the school
- each day before operating the bus, perform the daily circle check
- ensure that every object carried onto the bus for transportation that cannot be held by a passenger is placed as close to the front barrier as possible and as low as possible. These objects should not exceed the height of the barrier and should be placed, when possible, in front of or under a seat that is close to the front of the bus

Railway crossings

School buses are required to stop at all **uncontrolled** railway crossings.

When approaching an **uncontrolled** railway crossing, every school bus driver **shall:**

- signal right and move the bus as far to the right as is safe and practical
- cancel the right signal and activate the four-way flasher:
  - not less than 100 m from the railway crossing on a highway with a speed limit of over 50 km/h
  - not less than 25 m from the railway crossing on a highway with a speed limit of 50 km/h or less
- stop the bus not less than four and not more than 10 m from the railway crossing
- open the front door of the bus and look in both directions for oncoming trains
- close the door
- proceed across the tracks when it is safe to do so and, in the case of standard transmissions, remain in gear until the bus is completely clear of the tracks
- check mirrors
- turn off the four-way flasher, turn on the left signal and move back onto the travelled portion of the highway when it is safe to do so

Driver to notify employer of certain matters

Every driver shall promptly notify the school board, municipality or employer of any of the following:

- Any conviction against the driver pursuant to:
  - *The Alcohol and Gaming Regulation Act*, *1997* respecting the operation of a motor vehicle
  - The Criminal Code (Canada)
  - *The Traffic Safety Act*
  - any regulation made pursuant to any of the Acts mentioned in subclauses i) to iii)
- Any suspensions or revocations of the driver's licence, a refusal by the administrator to issue a licence to the driver or a licence restriction imposed on the driver by the administrator
- Any medical condition that in the opinion of the driver's physician or health care provider could have an impact on the driver's ability to safely operate a bus

Driving techniques

Braking

When you are braking a school bus, you should brake gently and over a long period of time to keep your passengers in their seats – remember your passengers are not secured. You should also make sure that the wheels are straight throughout braking. (See the *Saskatchewan Driver's Handbook* for a discussion of braking techniques.)

Backing

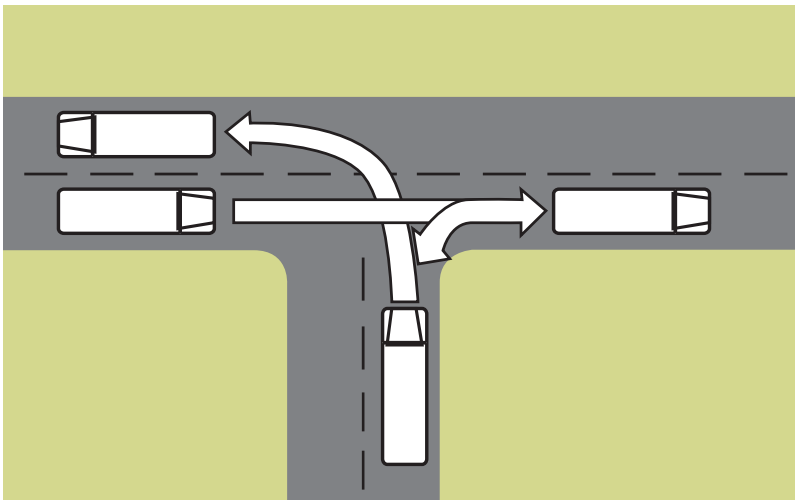
You should try to avoid backing your school bus whenever possible. it is a difficult and potentially dangerous practice. In fact, backing a bus on school property is not permitted unless you have a responsible person to guide you.

Two-point turns

During your bus driver's test, you will have to demonstrate that you can back straight, and carry out a two-point turn.

To back straight, use your side mirrors to see where you are going.

Activate your four-way flashers. After making the appropriate checks (including checking the road you will be backing into), back slowly into the side road, beginning your turn early and turning gradually. Do not wait until you are at the corner to make a sharp turn.



Mirror use and shoulder checks

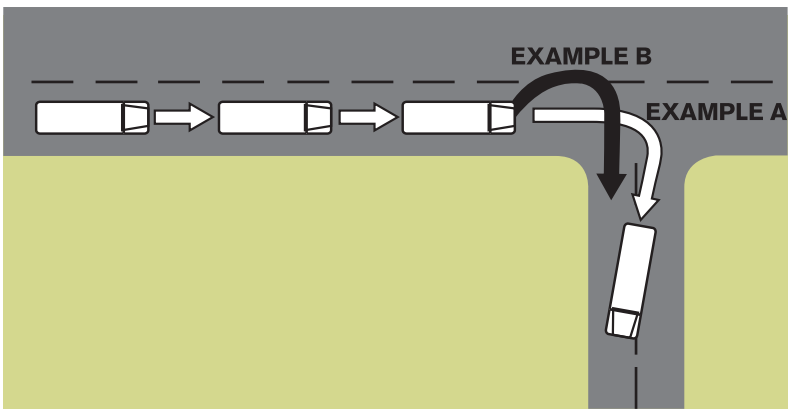
Check your two outside mirrors to see if your gates (see the *Saskatchewan Driver's Handbook*) are open. Use your convex mirrors to see if there are any vehicles in your "blind spot." A shoulder check to your left may also help, but you will have to rely on your convex mirrors to see what is on the right side of your vehicle.

Lane position

Since you are driving a wide vehicle, you should drive in the centre of the lane as often as possible. Your lane position becomes critical on turns and curves.

Right turns

It is difficult to stay in one lane when making a right turn with a long vehicle. Often you have to choose between crossing the lane line before turning the corner or after the corner. In most circumstances, when clear, cross the lane line after the corner (see Example A), provided the road design and traffic allows you to do so. There may, however, be situations where using Example B would be better. In doing so, every effort must be made to approach the turn in a position that partially blocks the curb lane preventing traffic from getting in between the bus and the curb. Either choice is acceptable if done safely.



Passing

Because school buses make frequent stops and starts, it is best to avoid passing slow-moving vehicles. If you must pass, you should only do so on a long straight stretch of highway with a sight distance of at least 50 seconds. Practise the passing judgment system described in the *Saskatchewan Driver's Handbook*.

Sharing the road

As a school bus driver, you must always watch out for other motorists, especially when pulling into or out of traffic. Try to time your entry into traffic so that you will disrupt the traffic flow as little as possible. This courtesy should prevent any close calls with other vehicles.

General procedures for stopping the bus and moving back into traffic

1. Check your rear view mirrors early when you know a school bus stop is approaching. Consider traffic patterns for both following and oncoming vehicles:
   - Is traffic relatively clear, and can the stop be made with little or no hazard?
   - Is there a long line of following vehicles waiting to pass the bus?
   - Does a following driver appear impatient and anxious to get by?

2. If possible, let following traffic pass, signal your intention, reduce speed and, if safe and practical, move to the edge of the driving lane or shoulder.

3. Activate your safety lights at least 100 m before the bus stop to give other drivers ample warning.

4. As you approach the stop, pull the bus to the edge of the road. You should attempt to stop as far to the right as practical. But stay at least 1 m (3 ft.) away from any waiting students, just in case one accidentally pushes another or slips while trying to get close to the bus.

5. While stopped, you should set the parking brake and shift into neutral. This prevents the bus from moving while students are loading or unloading.

6. Leave your safety lights on, cancel your turn signal and check that oncoming and following traffic is completely stopped. When you activate the release on the door handle, the stop arm will go out on some buses. On other buses, you must activate the stop arm separately.

7. When it is safe to do so, open the door of the bus and allow the students to board or leave.

8. When students have been safely loaded or unloaded, turn off your safety lights. In winter, you can close the door, but do not lock it until you are sure your students are safe. The stop arm will stay activated until the appropriate time.

9. When traffic is clear, signal, pull back onto the highway and proceed to your next stop.

Different locations have different hazards. Discuss the particular problems of loading and unloading on your route with your supervisor, or with a school bus driver who has had your route before.

Your loading and unloading operations will be successful if you are patient and courteous and refuse to allow the students to leave the bus until it is safe for them to do so.

When unloading students in an urban area where use of safety lights and stop arms are prohibited, use this as a guide:

1. Unload on the same side of the street as the student's home.

2. Unload as near to the residence as possible.

3. Maintain eye or mirror contact with the student until the student is well away from the bus.

4. If it is impractical to unload on the same side of the street as the student's home, unload as near to an intersection as possible.

5. Instruct the students to proceed across the street only when your bus has cleared the intersection and it is safe to do so.

6. Bring the matter of the street crossing to the attention of your superior so the parents may be notified the student is required to cross the street.

Motorists who pass unlawfully

In your daily travels, you may come across motorists who unlawfully pass your school bus when the safety lights and stop arm are activated. In such cases, the driver may be given a warning or be charged by police. It is up to you to report any violations of school bus legislation to the police. You must first establish that the law was broken, then try to identify the driver. You should obtain the licence plate number of the vehicle.

Emergency evacuation procedures

For information on the proper procedure for evacuating the bus in case of an emergency, contact:

Saskatchewan Safety Council
445 Hoffer Dr.
Regina, Sask.
S4N 6E2
(306) 757-3197

Legislation

The Traffic Safety Act and Regulations are the law for school bus operations, vehicle equipment and maintenance.

The Education Act and Regulations provide legislation which school boards must adhere to. You should be familiar with these laws as they apply to you.

Each board has its own policy which clearly specifies what you, as a school bus driver, must do. You must know the policy and procedures in detail and carry them out.

8. Winter driving

Driving collisions increase at a chilling pace in winter. That's because many drivers don't understand the winter driving picture. They fail to take into consideration the hazardous conditions created by winter weather – tricky traction and poor visibility.

Years ago most drivers worked out their own winter driving problems. Those were the days of partially deflated tires, back off or removal of front brakes, wheel sanders, etc., but skidding, jack-knifing and traffic tie-ups during the winter kept on happening.

Front brakes were often blamed because drivers learned that locked front wheels could not steer, regardless of how the steering wheel was turned. The idea of backing off or removing the brakes during the winter months was considered, but it didn't help; in fact, it reduced effective braking and lengthened stopping distances. Jack-knifing and rear skids increased because of this practice.

Winter driving demands special defensive driving skills and adjustments, as well as just plain common sense.

Prepare early for winter

The trucking industry has often been criticized because its heavy vehicles have jack-knifed or skidded, blocking traffic on crowded roads and highways. The first step in preventing these unnecessary occurrences, which cause adverse publicity as well as much property damage, is to make sure equipment is ready for that first unexpected freeze or storm.

Check these essential items

1. **Radiator** – Make sure proper winter coolant is installed and that there are no leaks.

2. **Tires** – Make certain all tires have good tread.

3. **Wipers** – Be sure your wiper blades are in good condition, so they will sweep snow and sleet off, rather than slide over it.

4. **Heater and defroster** – Make sure the heater and defroster are functioning well enough to keep the windshield clear at all times.

5. **Lamps** – Be sure both headlamps work on upper and lower beams and are correctly adjusted; also that stop, tail, clearance lamps and directional signals work properly and are clean, so they are clearly visible to other drivers.

6. **Brakes** – As roads become slippery, it's necessary that the brakes be in the best condition and balanced for uniform braking. This is even more critical with trains or doubles operations.

7. **Muffler and exhaust system** – These should be in good condition and tightly fitted so carbon monoxide does not seep into the interior of the vehicle where it could cause serious illness or death to the driver or occupants.

8. **Battery** – Cold weather greatly lowers battery power. Make sure yours is in good condition, and in case it's necessary, know the proper procedure for using a booster battery.

9. **Fifth-wheel lubrication** – For tractor trailer combinations, make sure a winter grade of lubricant is used on the fifth-wheel. Some heavy summer grades of lubricant at low temperatures become too heavy and interfere with steering on slippery surfaces.

10. **Windows and mirrors** – Make sure that windows are clean to ensure good visibility. Mirrors should also be kept adjusted and clean for good visibility to the rear.

The six primary hazards of winter driving

While the two major hazards in winter driving are commonly referred to as poor traction and reduced visibility, research has shown that there are six important problems which confront the commercial drivers.

These are:

1. **Poor traction** – Being unable to pull away from a standstill on an icy road, to go up slippery hills or to negotiate deep snow can cause trouble ranging from aggravating delays because of burnt tires to major traffic tie-ups and accidents.

   To improve traction, good tire treads are necessary. Start off slow and easy, and do not spin your wheels, because this only digs you in deeper. In deep snow, in order to get room to move, a good idea is to turn your wheels from side to side to push the snow away from the tires. Another good trick is to move your vehicle back and forth four or five feet before you shut down. This packs heavy snow. When you are pulling out use a light foot on the accelerator, easing forward gently.

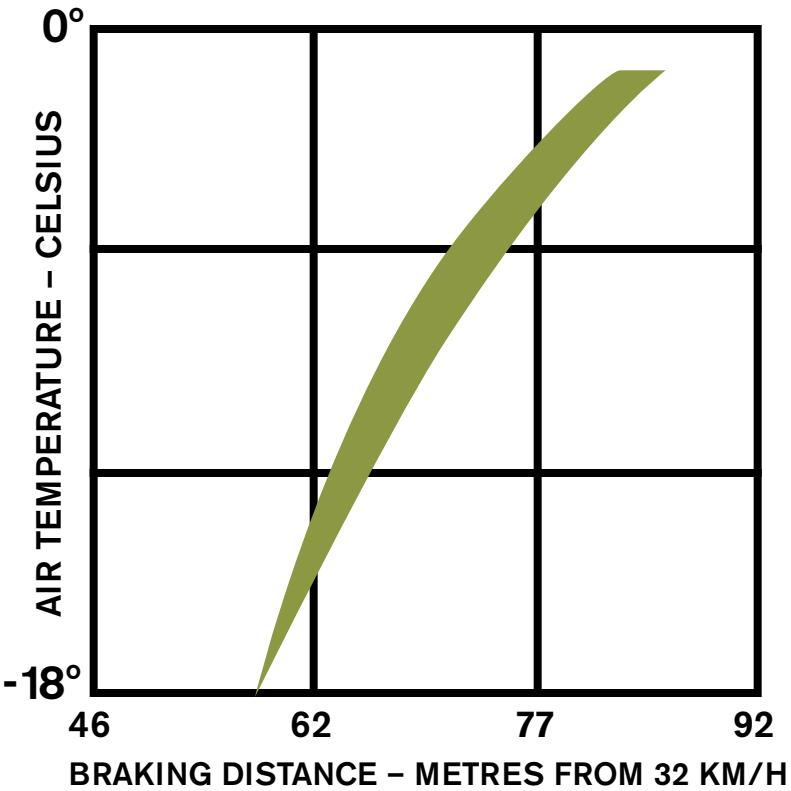
2. **Reduced ability to stop** – On ice and snow it takes three to 12 times more stopping distance than required on dry roads. These longer stopping distances contribute to the cause of many winter collisions.

   Test studies indicate that the heavier the vehicle the greater the stopping distance. Under severe winter conditions this gap widens accordingly. Gearing down of the vehicle also assists in bringing it to a safe stop.

3. **The effect of temperature on starting and stopping** – Temperature plays an important part in braking distance and traction on ice and snow. As the temperature rises, ice becomes much more slippery.

   Your braking distance can double with a temperature variation from –18°C to around 0°C. It is important, when driving in winter weather, to periodically get the feel of the road. This should be done only at a slow speed.

The chart shown below shows the effect of temperature on braking distance, with a tractor and semi-trailer on ice, gross load 19,100 kg.



4. **Ice and snow made slippery by traffic** – The action of tires spinning and sliding on snow and ice greatly decreases traction on already hazardous road surfaces. This happens mainly at intersections, on curves and on hills. This polishing of the road surface increases braking distances, slows traffic and presents a severe hazard at intersections. It's up to you to understand this fact and compensate for it in your driving. **Slow down** before you reach that slippery intersection and **slow down** before getting into a curve or before going down a hill. Adjust to the existing road, weather and traffic conditions. Gearing down may be necessary to slow down safely.

5. **Reduced ability to see and be seen** – Winter driving hazards can be avoided, but you've got to see them.

   Driving without completely clearing your windows invites disaster. Before starting your trip, clean off the entire windshield and all windows. Wipe off the headlamps, stop and tail lamps and turn signals so that others may see you. This may be necessary several times during a heavy storm. An extra few minutes could save your life.

   There is a tendency by many drivers to overdrive their headlamps. A heavily loaded truck travelling at 100 km/h requires approximately 138 m of braking distance. Therefore, with headlamps strong enough to illuminate 108 m ahead, a vehicle could travel 31 m beyond where an object was first seen. The effective range of headlamps varies greatly and the visibility of objects is affected by many factors. When driving at night or during adverse weather conditions, use headlamps – not parking lamps – to increase your ability to see and be seen.

   Road spatter can leave you driving blind. Use your windshield wiper often. At night, stop occasionally to clean off headlamps. In fog or heavy snowfall keep lamps on low beam and adjust your speed accordingly.

   Run your heater and defroster a few minutes before you start out. You'll prevent sudden fogging of your windshield.

   Wipers should be in top condition – both blades and arms. If new blades are installed they can be inefficient if arm pressure is inadequate. This shows up in poor wiping. Pressure of one ounce per inch of blade is needed and recommended.

6. **Jack-knifing** – There are two distinct kinds of jack-knifing:
   1. A tractor jack-knife in which the tractor rear skids sideways.

   2. A trailer jack-knife in which the rear of the trailer comes around.

   Repeated tests have shown that if a jack-knife develops beyond 15 degrees it is almost impossible to recover. The faster this 15 degree angle develops the greater the severity and potential damage of the jack-knife.

   Since a jack-knife can go to 15 degrees in length in one and half seconds, any attempt to recover must be fast in order to take preventive action

Winter driving tips for the professional driver

Recognize the special hazards of winter driving and know the techniques needed to drive safely in spite of them. The facts are here, the rest is up to you.

- **Be able to see and be seen** – Clean all the snow and ice off of your windshield, other windows, outside mirrors, lamps and reflectors. Make sure your vehicle is equipped with good windshield wiper blades and that wiper arms are exerting enough pressure on the blades to ensure a clean sweep. If moisture or ice builds up on your windshield, stop and clean it off
- **Tires** – Tires with good deep treads are essential for good cornering and handling on slippery roads. Check air pressure frequently to maintain the manufacturer's recommended pressure
- **Get the feel of the road** – Occasionally, try your brakes or gently depress your accelerator while driving; adjust your speed according to existing conditions. Rising temperatures greatly reduce traction on ice and snow
- **Stretch your following distance** – Knowing that winter road surfaces may increase stopping distances three to 12 times, the smart driver increases the normal dry road following distance. Heavy trucks require longer stopping distances on slippery roads than passenger cars – don't tailgate
- **Brake before curve** – All vehicles are particularly sensitive to overpowering, oversteering and overbraking on curves. Unseen hazards around the bend may require evasive action, so turn your steering wheel slowly and smoothly, keep a constant speed in the turn, and pump the brakes carefully if it's necessary to slow down or stop
- **Intersections** – Be extra cautious at intersections where snowbanks can reduce visibility
- **Pump your brakes** – The key to stopping under control on slippery surfaces is to avoid locking the wheels. A rapid pumping of brakes will provide short intervals of braking and rolling which will enable you to maintain steering control while stopping. With air brakes your system does not apply and release as quickly as with hydraulic or electric brakes
- **Watch for reduced clearances** – These are caused by accumulated snow or ice
- **Air Tanks** – Drain air tanks daily

The consignee is responsible for:

- completing, signing and forwarding all required documents for wastes to the proper authorities
- meeting the requirements of a consignor when returning empty packages, containers or vehicles that are not purged or cleaned

Classifying dangerous goods

The Dangerous Goods Transportation Act divides dangerous goods into nine classes according to the type of hazard involved. Some of the classes are further divided into divisions which identify the hazards more specifically. The regulations contain lists of dangerous goods that prescribe their shipping name, classification, UN/product identification number and packing group.

Safety marks

Safety marks are used to indicate the presence of dangerous goods and to identify their hazard class. The visible safety marks are generally the labels, placards and UN/product identification number.

Labels are used on packages, cylinders, drums and other small containers. **Placards** are used on large containers (capacity over 454 l) and transport units. **UN/Product Identification Numbers** are four digit numbers that are assigned to a specific product; eg. gasoline is UN1203. UN/PIN is required if the dangerous good is in trailerload, truckload or bulk quantities. Please refer to the *Saskatchewan Truckers' Guide* for more information about labels and placards.

Dangerous goods routes

Routes may be established within certain cities, towns and villages over which dangerous goods must be transported. These routes are identified by the posting of signs. Dangerous goods routes are authorized by civic bylaw and the respective civic administration may be contacted for particulars of their dangerous goods route bylaw.

Documentation

Proper information on a shipping document helps ensure the safe handling and transporting of dangerous goods. It also provides valuable information to those who may have to deal with a dangerous occurrence or accident involving these goods.

The consignor must ensure that the shipping document contains all the required information in the order specified, that the document is signed, and is accompanied by any other required documents or certificates and that it is given to the initial carrier.

The regulations provide that the shipping document shall be located during transport as follows:

- When the driver is in the cab, one copy in the cab within the driver's reach or in a pocket mounted on the driver's door
- When the driver is not in the cab, one copy on the driver's seat or in a pocket mounted on the driver's door
- If the transport unit is a tractor/trailer and the trailer containing dangerous goods is detached and left in a parking area, leave a copy of the shipping document with the person in charge of the parking area
- In cases that are not covered by the above, leave the shipping document in an accessible, identifiable waterproof receptacle securely attached to the transport unit

The carrier must also ensure the document is passed along with the dangerous goods to any subsequent carrier or to the consignee.

Except when dangerous goods that are to be transported as waste or by air, any kind of shipping document may be used providing that it contains all of the criteria for shipping documents that is required by the regulations.

When the dangerous goods have been unloaded but due to residues that remain in the transport unit a danger still exists (eg. bulk fuel haulers), the regulations provide that the carrier's copy of the shipping document is to be marked "RESIDUE – LAST CONTAINED" and accompany the transport unit until it has been re-loaded and/or cleaned and purged so that no hazard exists.

When transporting waste dangerous goods, a manifest that is prescribed in the regulations must be used. A pamphlet explaining how to obtain and use the manifest is available from the federal and provincial departments of the Environment.

Vehicles displaying a dangerous goods placard must stop at uncontrolled railway crossings.

For further information, contact:
Dangerous Good Transportation Section
Saskatchewan Ministry of Highways and Infrastructure
Phone (306) 975-5105
or any traffic officer in your area, or consult the *Saskatchewan Truckers' Guide.*

Note: *The Dangerous Goods Act* and Regulations restrict the movement of vehicles while displaying dangerous goods placards. Accordingly these vehicles CANNOT be permitted to be used for examination purposes.

Notes

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