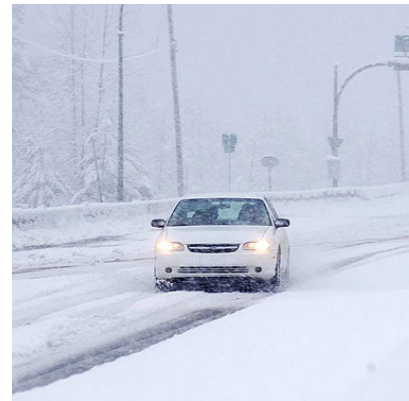


Canada: Winter Driving

If you're visiting Canada in the snowy months, and you come from a snow-free or low-snow climate, you may have some questions about winter driving. Here are the basics, to help you feel more confident.



How to Drive in Winter

The first thing that most Canadians do before driving in the winter is to **check the weather forecast and winter road report**. The forecast will (probably!) let you know if the weather is about to change; it is not a pleasant experience to start an hour of highway driving in clear weather, and once you're halfway to your destination, find that you're driving during a heavy snowfall, with snowy roads and very limited visibility. The road report will give you a good idea of the road conditions. You can check the weather forecast and road report online, but you can also listen to a local radio station to get detailed local information. [Radio-Locator](#) has a fairly extensive listing of Canadian radio stations, their frequencies and formats.

Two four-letter words give the key to safe winter driving: **slow down!**

The main problem with winter driving is that the roads can be very slippery. Just how slippery depends on where you are, the past winter weather, the current winter weather, and how much winter road maintenance (salting, sanding, snow removal) has already taken place. But you need to **assume the worst** until you know otherwise.

When you drive away from your parking spot, take at least 5 minutes of driving, and preferably 10-15 minutes, to get a feel for the road conditions. Look in your rear view mirror, and if it is clear, tap on your brakes very gently to get a feel for how slippery the road is; if you don't feel any loss of traction, tap on your brakes again, a little more firmly.



If at all possible, find an empty parking lot covered with snow to practice in. Practice braking and turning on the slippery surface at progressively higher speeds to get practice with braking and skidding on icy and snowy roads. You should intentionally skid your vehicle in a safe place, so that you gain some confidence that you can recover from a fishtailing skid when you accidentally brake too hard or turn too quickly.

In **extremely** icy conditions, touching the brakes or the accelerator, even lightly, can put you into a skid. In this situation, **shift to a lower gear** to control your speed.

If you're new to winter driving, pretend you're driving a limousine and the folks in the back have full martini glasses! If they spill their drinks, you'll lose your tip. So:

- accelerate slowly and gently, especially after stopping.
- decrease your speed and leave yourself plenty of room to stop. You should allow at least three times more space than usual between you and the car in front.
- brake gently to avoid skidding. If your wheels start to lock up, ease off the brake.
- decelerate even more slowly and gently, and plan to stop at a point about ten feet closer than you usually would, to give room to slide if the road is slippery.
- don't use cruise control or overdrive on icy roads.
- drive slowly. Don't drive the speed limit until you feel confident that road conditions warrant it; in very poor winter driving conditions, you will find that almost everyone drives 20 to 30 km/hr below the posted speed limit.
- keep your lights and windshield clean, to make it easier to see road conditions ahead.

Getting Ready to Drive

Although many winter days are dull and overcast, a clear winter day can be a dazzling experience because **the bright sun reflects off the white snow all around**. Although it won't be on the top of your packing list for a winter holiday, make sure to **bring your sunglasses** for safe driving in these conditions. Also, sunset and sunrise take longer in Canada, due to the higher latitude; in the winter months, you can find yourself driving directly toward the rising or setting sun for half an hour or more in the morning and late afternoon / early evening.

You will quickly discover that **a pair of winter driving gloves** (warm mittens or gloves with leather palms and fingers) is a necessity when driving in cold weather. They will keep your hands warm while clearing your car of ice and snow, you can drive with them on until the steering wheel warms up (which can take 10-20 minutes), and in extremely cold weather (below -30), they will keep you from getting frostbite by touching freezing cold car door handles and the ignition switch with your bare hands.

In the winter, it is not a smart idea to drive away from your parking spot as soon as you start your car, if your car has been parked for long. This is because all your windows have cooled down to the exterior temperature. Soon after you get into the car, **they will fog over** on the inside from your warm breath or the interior heater. You need to idle your parked car with the **heater set to the defog setting and the fan turned up high**. To shorten the time it takes for the windows to defog, ensure that you have selected **“fresh” air** rather than “recirculation”, which will rid the car of the humid air causing the windows to fog.

Make sure the **vents are directed at the windows**, not at the vehicle's occupants. After a little while, the windows will fog over (good thing you weren't driving!) and then they will slowly clear again once the interior defoggers warm the inside of the glass sufficiently. If you drive as soon as you can see out the driver's side of the windshield, without waiting for the entire windshield and side windows to clear, you risk receiving a ticket for driving without sufficient visibility. So don't rush.

While the windows defog, you likely won't be sitting inside your vehicle. That's because one or two other things probably happened to your vehicle while it was parked; unless you had a very brief stop, you may return to find that **your windows are covered with frost and/or snow**. So you need to pop into the car, start it up to defog the windows, and grab your snow brush and/or ice scraper (or a snow brush equipped with an ice scraper at the other end) to clean the windows.

There really are no good substitutes for these winter tools, so make sure your rental car comes with both of them. If you are entering Canada in your own vehicle, you will find that they are sold in every service station. A poor substitute for a snow brush is your coat sleeve, while a credit card can be pressed into service to scrape your windows. If you try either of these makeshift solutions, you'll soon realize why they are not nearly as good as the proper tools for the job.

You might think that you only need to brush the snow off your hood (bonnet) and windows, and scrape the ice off of your windshield. This is an especially tempting thought when it is **really** cold outside. But frosty windows mean reduced visibility when driving. You will probably need to use your **ice scraper on your side mirrors, rear side windows** (so you can see to make a shoulder check), and don't forget the rear window. (Although many rear windows come with a built-in defogger, this is usually not powerful enough to melt frost off the window in a timely fashion.) Snow from your front bumper will blow onto your windshield, while snow from the roof will blow back and reduce your ability to see vehicles behind you,

as well as their ability to see you in low light conditions. **Keeping your windshield clean will make it easier to see road conditions ahead. By keeping your headlights / taillights clean, it will make it easier for others to see you.**

In warming weather, you will find that snow and slush can quickly cover your windshield. A rental car should have a full windshield fluid reservoir; if you're driving your own car, make sure you've filled the reservoir with windshield washer antifreeze (used straight, rather than mixed with water like radiator antifreeze) and you should have a spare jug in your trunk.

Winter Tires

Winter tires are identified with a [mountain snowflake](#) logo. Unfortunately, aside from the province of [Quebec](#), winter tires are often **not** available on rental cars in Canada. **Winter tires are not** the same as all-season tires, all-weather tires, or M&S (mud & snow) tires. Since winter tires significantly improve winter driving safety, especially on snow and ice, ask for them from your rental company. If there are enough requests, they may finally change their policies in the interest of customer safety and satisfaction.

Winter Survival Kit

The [Canadian Automobile Association](#) recommends that you keep the following items in your trunk, in case of winter driving emergency.

- shovel
- sand or kitty litter
- traction mats
- tow chain
- compass
- cloth or roll of paper towels
- warning light or road flares
- extra warm clothing and footwear
- emergency food
- booster cables
- matches and a “survival” candle in a deep can (to warm hands, heat a drink or use as an emergency light)
- fire extinguisher
- extra windshield washer fluid
- fuel line antifreeze
- reflective vest



Keep the following items inside your vehicle.

- road maps
- ice scraper and brush
- flashlight
- first aid kit
- blanket (special “survival” blankets are best)

What happens to the roads when it snows?

Roads are assigned a snow-clearing priority; the busiest highways and urban roads have top priority, and sanders, plows, and graders tend to these roadways first before going onto the smaller, quieter streets. In many cities, residential roads get minimal snow clearing, which means that a layer of packed snow builds up on these side roads, which will stay there until the weather warms up.

If there is only a light snowfall, then sanding trucks will be sent out. These are modified dump trucks which are filled with a mixture of sand or gravel and salt. An impeller mounted at the bottom rear of the sanding truck spreads the sand on the roadway. The salt serves to melt the snow or ice, and it also keeps the sand flowing; without the salt, the sand would freeze into a solid mass. The sand adds traction.

In heavier snowfalls, the sanding trucks will be filled with a mixture of salt and gravel or rock chips, rather than salt and sand. The salt will not be able to completely melt the larger volume of snow, so gravel is spread on top to add traction. The salt does help to melt the snow a little, turning it into slush, however when temperatures fall below -10C, salt is less effective.

Stay well back from sanding trucks when their amber or red roof-mounted lights are flashing; this indicates that they are actively sanding the roads. If your vehicle is too close to the back of a sanding truck, your windshield could be damaged by flying rock chips. You should **stay back at least 10 meters**. Be aware that sanding trucks will often sand near intersections, because vehicles have to slow down there, but not on the road leading up to the intersection. So you could safely follow a sanding truck very closely--right up until the moment the sanding truck driver turns on the sander as the truck approaches an intersection.

In really heavy snowfalls, snowplows and snow graders will be dispatched to scrape the snow right off the road. The snowplow blade is often wider than the vehicle pushing it, so **if you must pass a snowplow or grader, give it extra room**. Snow graders have a straight blade mounted under the chassis, between the front and back wheels.

The term "**devil's strip**" is used by some highway maintenance crews to describe **the white strip of snow and ice dividing lanes of traffic**, when the driving lanes themselves are clear of snow. It has a variety of causes, but as a new winter driver, your main consideration is that **it will affect your traction in unexpected ways** (hence the name). Seasoned winter drivers move across the "devil's strip" gradually, rather than risk losing control of the vehicle. Snow plows and graders will eventually remove the devil's strip, but it takes time to get to every road after a snowfall.

The other major hazard in winter driving, aside from snow or ice on the roads, is **limited visibility**. This may be caused by snow **blowing across the road, heavy falling snow, and/or white-out conditions** (where bright but cloudy skies make it difficult to tell the sky from the snowy ground). In very poor visibility, **it can be extremely hard to actually see the road**. It's best to avoid driving when you know that there is poor visibility; however, if you're caught out in poor visibility, a popular (though hazardous) tactic is to keep the tail of another vehicle in view, until you find a safe point to exit the road. And, of course, to slow down!

"Black ice" is a situation where transparent ice covers part of the road. Unsuspecting motorists crossing black ice can find themselves **slipping suddenly out of control**. One of the ways to recognize black ice is if all of a sudden your tires go silent. Black ice might not be visible, but it is often predictable. A rainy winter day or evening usually means icy conditions the next morning, after the temperatures drop below freezing overnight. In the late fall or

early spring, a light snowfall may melt as soon as it touches the warmer road surface; however, the melted snow may turn to a layer of ice when temperatures dip at night. If the temperatures stay below freezing during the day, then the layer of ice will remain until road maintenance crews attend to it. **Ramps, bridge decks and overpasses** cool more quickly than other road surfaces, so **you can encounter black ice on them** when the rest of the road is bare and dry.

"Slush grab" is when your tires track the slush on the shoulder or in between the ruts on the road during a lane change. It's easy to overreact and spin out. If you're dealing with this on the shoulder, gradually steer back to the lane. If you keep drifting toward the side of the road, don't panic. Just hold the wheel steady while easing off the accelerator a bit until you gain control and start drifting back into your lane. The wheel in the slush has more resistance and the vehicle will try to go that way. The key is slow, gradual correction. The same rule applies to lane changes. Be aware that when roads are slushy, a passing car can easily coat your windshield and reduce your visibility to zero. These conditions are more common in areas that spread salt to clear snow, such as Southern Ontario. However, you may also encounter slush grab in other parts of the country in late fall and early spring after there has been a moderate snowfall on warm road surfaces.

Winter Road Conditions

Here are the [Alberta Motor Association's](#) definitions of good, fair, and poor winter road conditions, to give you an idea of the range of conditions you may encounter.

Good: Conditions not affecting, or minimally affecting, traffic flow.

Road conditions:

- Bare dry, bare wet, or chemically wet*
- Snow and ice removed from driving lanes; excessive loose snow removed from the shoulders and centre line
- Light snow cover: ice and packed snow between wheel paths and on centre line OK; little to no snow on shoulders
- Short sections of ice and packed snow acceptable

**Pavement is considered chemically wet when salt has been applied and the temperature is below 0 °C*

Weather conditions:

- Good
- Light snow, rain or fog

Visibility:

- Good
- Greater than 500 m

Fair: Road still passable, reduced speeds required and some delays may be experienced.

Road conditions:

- Small amount of snow / ice accumulation on road surface and in wheel paths
- Drifting snow blowing
- “Finger drifts” of snow accumulating on shoulders and into driving lanes
- Some ice or black ice in predictable areas: bridge decks, hills, curves
- Small amount of slush on the road surface

Weather conditions:

- Heavy snow, rain or hail
- Strong winds or blowing snow
- Fog patches

Visibility:

- Partially limited
- Between 200 m and 500 m

Poor: Road still passable for majority of vehicles; speed greatly reduced and long delays may be experienced.

Road conditions:

- Significant amounts of snow / ice on surface, especially in wheel paths
- Drifting snow partially blocking driving lanes
- Slippery roads from freezing rain/ ice build up / frost
- Black ice over long stretches of highway
- Roads rutted from snow / ice / frozen slush build up

Weather conditions:

- Freezing rain causing ice build up
- Heavy snow or hail
- [White out](#)
- Maintenance unable to keep up
- Strong winds causing large drifts blocking lanes

Visibility:

- Restricted
- Less than 200 m



Daytime Running Lights, ABS Brakes, and 4WD

Since 1989, all new cars sold in Canada have been equipped with daytime running lights. This is a feature which automatically turns on the headlights any time the engine is running. The headlights operate at a lower power setting (brighter than parking lights, not as bright as full headlights) which is intended to increase vehicle visibility. During Canada's long winter, there are often low light levels during the day, and because of its northerly latitude, the sun takes a long time to rise and set in Canada, leading to a longer period of twilight at dawn and dusk. The use of daytime running lights has significantly reduced daytime collisions. All rental vehicles are equipped with daytime running lights. If you are driving a vehicle without daytime running lights, it is a good idea to drive with your headlights on at all times, to increase your own visibility; in some provinces, this is required by law for vehicles not equipped with daytime running lights.

When daytime running lights are on, the taillights are **off**. This means that when you are in marginal visibility conditions (fog, blowing snow, rain) **you must still turn on your headlights**, so that your taillights will improve your visibility from the rear.

Anti-lock (ABS) brakes are on most vehicles; this is an excellent feature for winter driving. When the ABS is activated, the brake pedal will vibrate.

Visitors from warmer climates often mistakenly think that a four wheel drive (4WD) vehicle is helpful for safe winter driving. Before you run out and rent a 4WD, you should know that **four-wheel drive vehicles won't help much for stopping on sheer ice**. Actually, since most 4WD vehicles are trucks and sport utility vehicles (SUVs), they have poor traction over the rear wheels when not in 4WD mode, and it is not practical to constantly drive in 4WD. People who regularly drive these vehicles in the winter often place sandbags over the rear axle for extra winter traction. A better choice for winter driving is a front-wheel drive (FWD) or all-wheel drive (AWD) vehicle, but don't assume that having 4WD, AWD, or FWD will help you with slippery road conditions-- it won't! They suffer from the same lack of stopping traction as a two-wheel drive car. It will only help in conditions where there has been a recent deep snowfall which hasn't yet been cleared from the roads.

Very important: Fuel

- Fill up the fuel tank before you leave on your trip.
- Do not let the fuel level get too low - the driving time to the next gas station may take much longer than you ever expected, and if you get stuck, the car engine will be your only source of heat.

What should you do if you get stuck or stranded in the snow?

- Don't panic!
- Avoid over-exertion and over-exposure to the cold. Cold weather can put extra stress on the heart and contribute to the hazards of over-exertion. Sweaty clothes next to the skin are not good insulators against the cold.
- Stay in the car if you cannot shovel your car out of the snow.
- Stay in the car in blizzard conditions - Do not leave the car for assistance unless help is visible within about 90 metres or 100 yards.

- Turn on flashing lights or set up flares. A brightly coloured cloth on the radio antenna may make your vehicle more visible in daylight.
- Run the car engine occasionally (about 10 minutes every hour) to provide heat (and to conserve fuel). Ensure that the tail exhaust pipe is free of snow and keep the window opened slightly (on the side shielded from the wind) to prevent the build up of carbon monoxide when the engine is running.
- Bundle up in a blanket. If there is more than one person in the car, share - two people sharing blankets will be warmer than either person alone in a blanket.
- Wear a hat and scarf - the head and neck are major sources of heat loss from the body.
- Monitor for any signs of frostbite and hypothermia.
- Do not fall asleep. If there is more than one person in the car, take turns sleeping.
- Do not stay in one position too long. Do some exercises to help the circulation - move arms and legs, clap your hands, etc.
- Watch for traffic or rescuers.

ALWAYS KEEP IN MIND: BETTER SAFE THAN SORRY!

