Driving

Driving - Winter

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What makes the difference between an ordinary driver and a good one?

- An ordinary driver reacts to road situations.
- A good driver anticipates crises and avoids them.

How should I prepare a vehicle for driving under winter conditions?

Driving in winter weather - snow, ice, wet and cold - creates a great challenge for vehicles and drivers. Keeping the vehicle in good technical repair reduces the overall chances of any mishap or disaster while driving - particularly in winter weather. To prepare the vehicle for winter driving, give it a complete checkup. Look for the following:

Electrical system

- Battery - recharge or replace if the battery is weak. Also, have the charging system checked.

- Ignition - Check for damaged ignition wires and cracks in the distributor cap.
- Lights - Check all lights (headlights, side lights, emergency flashers, directional lights, taillights, brake lights and parking lights) for proper functioning.

Brakes

- Check brakes and adjust to ensure equal braking.

Tires

The traction between tires and roadway determines how well a vehicle rides, turns and stops, and is crucial for safe driving in winter. Proper tire selection is very important.

- Use four snow tires of the same type, size, speed rating, and load index for better handling, control and stability. In Canada, tires are marked with a pictograph of a peaked mountain with a snowflake. This pictograph means the tire has been designed to meet specific snow traction performance requirements and is designed for use in severe snow conditions.

Pictograph used to indicate "snow tires"

- Use all-season radial tires only in areas that receive only light snowfall.
- Use chains or studded tires on all four wheels when you expect severe snow and icy roads. Check with your local Department or Ministry of Transportation office to see if using tire chains or studded tires is legal in the region you plan to drive through.
- Check tire pressure and restore it to levels recommended by the vehicle manufacturer. The pressure drops about 1 psi for every 5°C (9°F) drop in temperature.
- Check the wear of the tires. Tires have tread wear indicators or bars that are inside the grooves of the tires. When the tread is close to (within 1.5mm) or the same level as the wear indicator, replace the tire as it no longer provides effective traction.
- Check tire balance and correct it if necessary.
- Check wheel alignment and correct if necessary.

Exhaust system

- Check the exhaust system for leaks. A properly sealed exhaust system reduces the risk of carbon monoxide poisoning.
- Keep the window in the vehicle slightly open when stuck in the snow, and run the engine and heater to keep warm as needed.
- Keep the exhaust pipe clear of snow. A blocked pipe can force carbon monoxide into the vehicle's interior.

Heating and cooling system

- Check the radiator and hoses for leaks.
- Ensure that your vehicle always has enough antifreeze rated for the coldest weather.
- Check the defrosters (front and back) to make sure they are working efficiently.

Windshield wipers

- Make sure that windshield wipers function efficiently. Replace them if they are old or worn.
- Fill the washer container with a windshield washer fluid formulated for low temperatures, and top it up frequently.

Fuel / Charge

- 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 expected, and if the vehicle gets stuck, the engine will be the only source of heat.
- If driving an electric-powered vehicle, make sure the vehicle has enough range for unplanned events, considering that low temperatures will reduce the range.

What should I include in a winter driving kit?

A well-stocked winter driving kit helps to handle any emergency. It should include:

- Properly fitting tire chains.

- Bag of sand or salt (or kitty litter).
- Tow rope.
- Traction mats.
- Snow shovel.
- Snowbrush.
- Ice scraper.
- Booster cables.
- Warning devices such as reflective triangles, flares, or emergency lights.
- Fuel line de-icer (methanol, also called methyl alcohol or methyl hydrate).
- Extra windshield wiper fluid is appropriate for sub-freezing temperatures.
- Roll of paper towels.
- Flashlight and a portable flashing light (and extra batteries).
- Blankets.
- Extra clothing, including hat and wind-proof pants, and warm footwear. Consider bringing hand and foot warmers.
- First aid kit.
- Non-perishable snacks or other "emergency" food and water.
- Matches and emergency candles - only use with a window opened to prevent the build-up of carbon monoxide.
- Road maps.
- "Call Police" or other help signs or brightly coloured banners.

How should I prepare for winter driving?

- Plan the drive in advance.
- Avoid driving when fatigued.
- Contact the provincial "Road Reports" or listen to radio or television reports to get updates regarding road conditions in the region to which you are going.
- Wherever possible, postpone the trip when the weather is bad.
- Check weather conditions for your travel route (and time) before you begin driving.

- Plan the arrival time at a destination by considering any delays due to slower traffic, reduced visibility, roadblocks, abandoned automobiles, collisions, etc.
- Inform someone of the route and planned arrival time.
- Choose warm and comfortable clothing. If there is a need to remove outdoor clothing later while driving, **STOP** the vehicle in a safe spot.
- Warm up the vehicle **BEFORE** driving off. It reduces moisture condensing on the inside of the windows. If the windows are fogging on the inside, use the air conditioner (it is a dehumidifier as well).
- **NEVER** warm up the vehicle in a closed garage.
- Remove snow and ice from the vehicle. It helps to see and, equally important, to be seen.
- Wear sunglasses on bright, sunny days.
- Bring a cell phone, but do not leave it in the vehicle as the battery will freeze.

How should I drive in winter weather?

- Buckle up before starting to drive. Keep the seat belt buckled at all times.
- **SLOW DOWN!** - posted speed limits are for ideal travel conditions. Driving at reduced speeds is the best precautionary measure against any misfortune while driving on slippery roads. "Black ice" is invisible.
- Be alert. Black ice will make a road look like shiny new asphalt. The pavement should look grey-white in winter.
- Do not use cruise control. Winter driving requires the driver to be in full control at all times.
- Reduce speed while approaching intersections covered with ice or snow.
- Allow for extra travelling time or delay a trip if the weather is inclement.
- Drive with low-beam headlights on. Not only are they brighter than daytime running lights but turning them on also activates the tail lights. This lighting makes the vehicle more visible.
- Lengthen the distance between your vehicle and the vehicle ahead. Stopping distance on an icy road is double that of stopping on a dry one. For example, from around 45 metres (140 ft) at the speed of 60 km/h, to 80 metres (over 260 ft) on an icy road surface.
- Stay in the right-hand lane except when passing, and use turn signals when changing lanes.

- Steer with smooth and precise movements. Changing lanes too quickly and jerky steering while braking or accelerating can cause skidding.
- Be aware and slow down when approaching a bridge. Steel and concrete bridges are likely to be icy even when there is no ice on the ground surface, (because bridges over open air cool down faster than roads, which tend to be insulated somewhat by solid ground.)
- Consider getting off the road before getting stranded if the weather is worsening.
- Be patient and pass other cars only when it is safe.
- Keep a safe distance back from snow plows, and trucks applying salt, sand or anti-icing agents.
- Never pass a snow plow due to the whiteout conditions and ridge of snow created by the plow.

What should I do if I start to skid?

- Above all **DO NOT PANIC!**
- Look where you want your vehicle to go and steer in this direction.
- **DO NOT BRAKE!** Take your foot off the brake if the vehicle starts to skid while braking.
- **DO NOT ACCELERATE!**

Should I put the vehicle into neutral during a skid?

Experts agree that during a skid, it is important to reduce the vehicle's forward motion to stop faster.

Many resources that promote putting your vehicle in neutral describe the following technique:

- Disconnect the driving force on the drive wheels by doing either of the following:
  - If you're using automatic transmission, shift to neutral. However, do not touch the transmission gear if you cannot do that immediately.
  - If you're using manual transmission, declutch.

Others promote leaving the vehicle in gear but do not apply the gas during the skid. At the end of the skid, it may be necessary to accelerate gently, or you may need to avoid an obstacle.

Using winter tires and driving at a reduced speed are more important factors that influence a vehicle's stopping distance.

How should I brake on a slippery road?

If the emergency does not require slamming the brakes as hard as possible, squeeze braking (also known as threshold braking) and declutching (manual shift) will do the job most efficiently.

Braking without anti-lock brakes

- Use the heel-and-toe method. Keep your heel on the floor and use your toes to press the brake pedal firmly just short of locking up the wheels.
- Release the pressure on the pedal and press again in the same way.
- Repeat this until you come to a full stop.

Braking with anti-lock brakes

Also, use the heel-and-toe method, but do not remove your foot from the brake pedal until the vehicle comes to a complete stop.

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

- Don't panic!
- Look for a safe place to stop and safely pull off the road. Try to stop at a rest area or exit the roadway and take shelter in a building.
- Avoid over-exertion and over-exposure to the cold. Cold weather can put extra stress on the heart and contribute to over-exertion hazards. Sweaty or damp clothes next to the skin are not good insulators against the cold and can increase how cold you feel. Change into dry clothes where possible.
- Stay in the vehicle if you cannot shovel the vehicle out of the snow.
- Stay in the car in blizzard conditions - Do not leave the car for assistance unless help is very close and it is safe to walk. It is easy to get disoriented in a blizzard.
- 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 vehicle's engine occasionally (about 10 minutes every hour) to provide heat (and to conserve fuel). Make sure 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 exercises to help the circulation - move arms and legs, clap your hands, etc.
- Watch for traffic or emergency vehicles.

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