



Be Car Care Aware™



Winter

Survival Guide

Winter Survival Automotive Tips

October is Car Safety Month and a good time to start preparing for winter driving. Car Care Canada recommends the following guide to keep winter at bay.

When the thermostat drops, we start wearing coats to protect ourselves from the cold, but most people don't realize that their vehicles also need some extra protection during the winter. A few quick steps are all it takes to help your vehicle perform its best this winter.

"Motorists in much of the country face harsh weather conditions each winter," said race-car driver and Be Car Care Aware spokesperson Kelly Williams. "The thought of a breakdown, an engine not starting or otherwise being stranded is stressful as it is, but those things happening in freezing winter weather adds another level of threat. An investment of an hour or so to have your vehicle checked is all it takes to have peace of mind and help avoid the cost and stress of a breakdown during harsh weather.

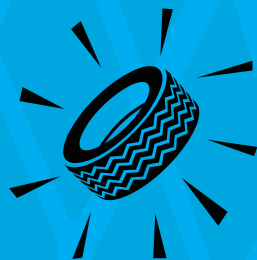
Annual Physical:

An annual physical is a good idea for each member of your family, including your family vehicle. Just like your annual physical, your vehicle's inspection can detect a problem before it turns into a costly expenditure, safety hazard, or even worse, a terminal illness.

Book An Appointment Now:

Don't wait for that first cold snap to book an appointment with your service technician to install your winter tires, have your battery, antifreeze, fuel and ignition systems, headlights and other key components checked.

Here are some other easy tips to help get your vehicle ready for winter:



Winter Tires Are a Must!

Don't be caught off guard by the first snowstorm or a quick drop in temperature!

The rubber compound of a winter tire is relatively soft. The rubber in an All-Season tire starts to lose elasticity and harden at temperatures around 7°C, greatly reducing grip, whereas a winter tire will only harden at around -40°C; therefore retaining its elasticity for much longer.

Check Your Tire Treads and Pressure

Tire tread condition is crucial when driving on ice and snow. Also check inflation. Make sure to also check the tire pressure of the spare tire.

(See Winter Tire Guide on Page 7)



Cooling System

Car Care Canada says keeping cool is important. Of course, they're talking about your cooling system. As strange as it sounds, your cooling system is one of the most important things to watch in your vehicle during the winter time. There are two things -- the concentration of coolant, and the amount. In most parts of Canada, a 50/50 mix of coolant and water keeps the coolant from freezing, lubricates the

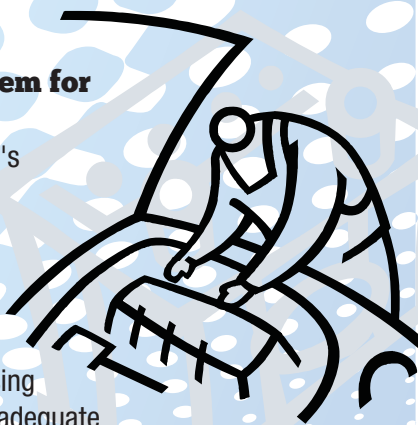
water pump, and protects the cooling system from corrosion. In very cold areas, it may be necessary to increase the concentration of coolant -- but never more than 70% coolant to 30% water. Also, coolant should be flushed and refilled at least every two years in most vehicles.

Heaters, Defrosters and Wipers

Wiper blades that are cracked or torn, or that chatter, streak and don't properly clean your windshield should be replaced. Some manufacturers offer special winter blades that have a rubber boot covering the arm assembly to keep snow and ice out. When changing the blades, have the windshield wiper system nozzles cleaned and adjusted if necessary, and check the windshield washer reservoir in case it needs fluid.

Check Battery and Charging System for Optimum Performance

Very cold temperatures will reduce a vehicle's battery power so it's important to keep the connections clean, tight and corrosion-free. Unfortunately, batteries don't always give warning signs before they fail completely. If your vehicle's battery is more than three years old, it's wise to replace it. When choosing a replacement, make sure the new one has adequate capacity for your exact make and model.



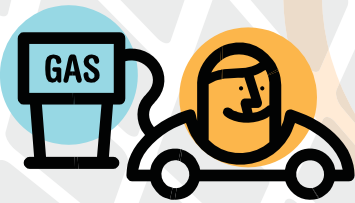
Change Your Oil

Check the owner's manual to see if you are considered "severe" and if so, have the oil changed accordingly, usually every 5,000-8,000 kilometres. Note, most Canadians qualify for severe conditions, which means you drive in stop and go traffic, in mountainous terrain, or other conditions that increase wear and tear on your vehicle. Have your automotive service technician check the fuel, air and transmission filters at the same time. Always consult your vehicle's owner's manual.



Keep Your Gas Tank At Least Half Full

This tip limits condensation in your tank and reduces gas-line freezing. Adding a little gas-line antifreeze every second fill-up will also help prevent gas-line freezing.



If You Are Due For a Tune-Up, Have It Done Before Winter Sets In

Winter magnifies existing problems such as pings, hard starts, sluggish performance or rough idling. A routine tune-up will restore a vehicle back to its normal operating state, and contribute to the overall efficiency of the engine and emissions system.



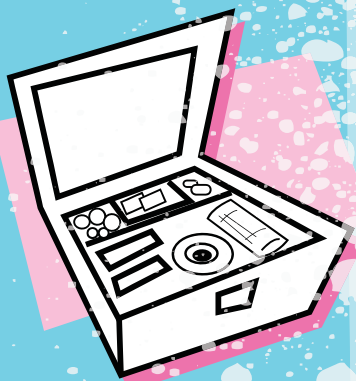


Check the Brakes

This braking system is the vehicle's most important safety item and brakes are a normal wear item that sooner or later will need to be replaced.

Check the Exhaust System for Carbon Monoxide Leaks

Leaks can be especially dangerous during cold weather driving when windows are closed. Regular exhaust system checks are critical to maintain a safe vehicle.



Pack An Emergency Kit

This is crucial if you get stranded, especially during a storm. Include an ice scraper and snow brush, jumper cables, flashlight, flares, blanket, extra clothes, candles/matches, bottled water, dry food snacks and needed medication. (See the Winter Road Side Safety/Emergency Kit and Do-it-Yourself Travelling First Aid Kit on next page.)

Winter Road Side Safety and Emergency Kit

This kit is for peace of mind during a roadside emergency or breakdown in nasty weather. It can be stored in a large sealing storage container.

- **Ice scraper**
- **Snow brush**
- **Flashlight with batteries**
- **Gas line anti-freeze**
- **Warm clothing and blankets**
- **Food and water**
- **Towing chain**
- **Shovel**
- **Flares**
- **Hand and foot warmers**
- **Matches**
- **An emergency cell phone**
- **Jumper cables**
- **Bungee cord**
- **Screwdriver**
- **Duct tape**
- **Fire extinguisher**
- **Good quality map**
- **Roadside-assistance phone number**



Do-it-Yourself Travelling First Aid Kit

Here is a DIY list that you can add to where you find the need. It is important to think about your requirements and pack what you need in small portions:

- **Bandages**
- **Disinfectant spray**
- **Anti-Bacterial ointment**
- **Gauze**
- **Pain Medication**
- **Antihistamine**
- **Anti-Nauseant (Gravol)**
- **Antiseptic wipes for cleaning wounds**
- **Hand sanitizer**
- **Thermometer**
- **Medication**
- **Health Cards**

Winter Tire Guide

Proper tire inflation, pressure and tread depth are critical for fuel economy, safety, tire life, and handling.

Car Care Canada has created a simple glossary and some tips to help you protect your tires. Some of these are winter-specific and some are just good practice year-round.

Why Winter Tires?

Car Care Canada reminds motorists who live in a cold, snowy and icy climate that winter tires are a must! If you haven't already installed winter tires, inquire with your mechanic, auto shop or tire retailer about whether your conditions warrant purchasing and installing these crucial tires.

Winter tires have an aggressive tread design that provide a better grip while throwing off snow and slush, providing more stability when braking and better vehicle handling.

The rubber compound of a winter tire is relatively soft. The rubber in an all-season tire starts to lose elasticity and harden at temperatures around 7°C greatly reducing grip, whereas a winter tire will only harden at around -40°C; therefore retaining its elasticity for much longer.

When purchasing/installing winter tires, remember the following:

- Install four winter tires - To help maintain control and stability of your vehicle in icy conditions, always install winter tires in sets of four.
- Mixing tires with different tread patterns, internal construction, and size degrades the stability of the vehicle and should be avoided.
- As a tire wears, snow traction is reduced. Tires that are worn close to the tread-wear indicators have reduced traction and should not be used on snow-covered roads or in severe snow conditions.

Other Tire Related Tips

Tire Inflation

Car Care Canada's free car care inspections, held in conjunction with National Car Care month, showed that 18% of vehicles had improperly inflated tires.

Proper tire inflation pressure is the specified air pressure given by a carmaker for a certain tire on a specific vehicle. This pressure specification should not be confused with a tire's maximum pressure, which is usually listed on the tire's sidewall. Some vehicles may specify different pressures for the front tires and the rear tires.

Correct inflation pressure is critical for good fuel economy, safety, maximum tire life, and proper vehicle handling performance.

Inflation Maintenance Tips and Suggestions

- Check your tires more often during the winter months. Tires will lose about 1 psi of pressure for every 5 degrees Celsius of temperature drop.
- Keep an accurate tire pressure gauge in your car's glove box (many gauges at "air stations" give false pressure readings) and check the tire pressure when the tires are cold. Never trust the appearance of a tire as a gauge for inflation. A tire could be 10 psi low on pressure and not appear to be low on air.
- Use the recommended inflation pressure listed in your vehicle's owner's manual or on the inflation sticker found on the driver's doorjamb. While you're at it, don't forget to check the spare. There's nothing more annoying than a flat spare when you have a flat tire.

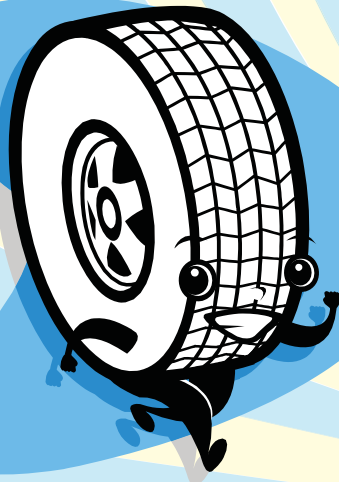
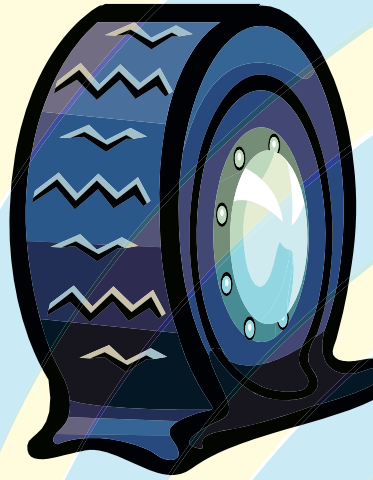
Tread Depth Check

Regular tread depth checks are important to ensure that your car's tires are safe. Excessive wear can result in a loss of traction, especially on wet and slippery roads. Tires are regular wear items and staying on top of their condition not only ensures your safety, but also gives you the opportunity to plan ahead and budget for inevitable tire replacement.

The simple way to measure tread depth is with a tread depth gauge. Tire wear bars are also used on today's tires as a hands-off visual indication that a tire needs replacement.

Tread Maintenance Tips/Suggestions

- When using a tread depth gauge, tires need to have at least one-fifth of a centimetre of tread or more.
- Generally, it's best to replace tires in sets of four.
- If your car's tires show signs of abnormal or unequal wear, have this looked into by a professional technician. Excessive wear on both outer edges generally indicates under-inflation. Excessive wear in the center of the tread generally indicates over-inflation. Cupping or dipping of certain tread sections may indicate worn suspension parts or a wheel balance problem. Saw-toothed or feathered tread edges may indicate wheel misalignment.



Winter Driving Tips

- **Drive according to the weather conditions - which usually means slow down and leave extra space.**
- **Install four winter tires. Make certain your tires are properly inflated.**
- **Plan your route so that you aren't making erratic maneuvers on the road.**
- **When driving on ice or snow, allow plenty of room to stop and start.**
- **Drive with headlights on to increase your visibility to other motorists**
- **Maintain a safe distance between your vehicle and others. Stopping takes longer on snowy and icy roads.**
- **Do not use cruise control on wet, snowy or icy highways.**
- **Keep your gas tank full to prevent the gas line from freezing and to maximize traction on slick roads.**
- **Stay on well-travelled roads if possible.**
- **Be sure all windows, lights, mirrors and licence plates are free of snow.**
- **Keep a Winter Road Side Safety and Emergency Kit in your car at all times, including an ice scraper/snow brush, first aid kit, jumper cables, a flashlight and a warm blanket.**
- **Let others know about your route and your expected arrival time.**
- **Always wear your seat belt.**
- **Avoid driving in poor weather conditions whenever possible.**
- **Avoid driving while you're fatigued. Getting the proper amount of rest before taking on winter weather tasks reduces driving risks.**
- **Never warm up a vehicle in an enclosed area, such as a garage.**
- **Avoid using your parking brake in cold, rainy and snowy weather.**
- **Always look and steer where you want to go.**
- **Use your seat belt every time you get into your vehicle.**
- **If the weather is really bad, just stay home.**



About The Be Car Care Aware Program

Be Car Care Aware is a consumer education campaign about the benefits of regular vehicle care, maintenance and repair. The campaign's goal is to build awareness and knowledge to prepare consumers to make sensible decisions about their vehicles. Built around three key message areas of dependability and safety, protecting the environment and enhancing and maintaining vehicle value, the campaign is spearheaded by Car Care Canada.

The goals of the campaign are to build awareness and knowledge to prepare consumers to make sensible decisions about their vehicles. As awareness builds, consumers will take action, thus reducing vehicle neglect. Reversing unperformed maintenance will benefit consumers by increasing their vehicle dependability and longevity, as well as maintaining or increasing the value of their vehicle. It will also increase profitability in the aftermarket, conserve energy, improve highway safety and benefit the environment by lowering greenhouse gas emissions.

For vehicle safety and maintenance tips, please visit

www.carcarecanada.ca

This message is brought to you by Car Care Canada with support from Natural Resources Canada.

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