

# Winter Safety: *Driving Edition*

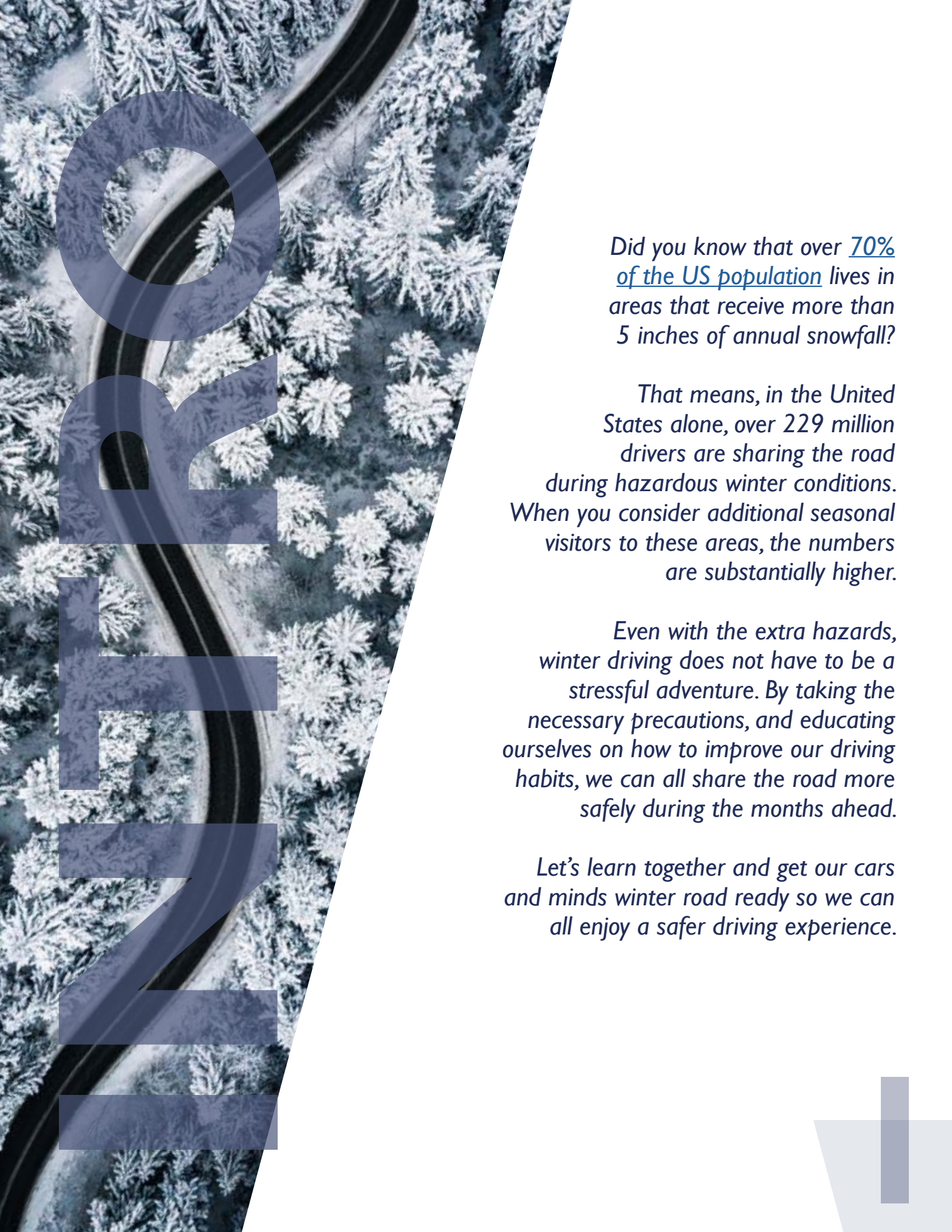
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# Winter Road Ready

Did you know that over 70% of the US population lives in areas that receive more than 5 inches of annual snowfall?

That means, in the United States alone, over 229 million drivers are sharing the road during hazardous winter conditions. When you consider additional seasonal visitors to these areas, the numbers are substantially higher.

Even with the extra hazards, winter driving does not have to be a stressful adventure. By taking the necessary precautions, and educating ourselves on how to improve our driving habits, we can all share the road more safely during the months ahead.

Let's learn together and get our cars and minds winter road ready so we can all enjoy a safer driving experience.





# BEFORE YOU DRIVE

Safely venturing out onto wintry roads requires a little extra prep work for both you and your vehicle. Here are a few helpful tips to ensure your drive goes smoothly and you are ready for emergencies.

## STAY CONNECTED



Before setting out on a drive, long or short, make sure your phone is fully charged and bring a charging cord with you. Install trusted apps to keep you informed of up to date weather, traffic, and road conditions. Some of these apps allow users to upload alerts in real time so you get the most current road safety info. Consider these free apps: Weather Bug, Weather Channel, Accuweather, Waze, Google Maps, Apple Maps, and Plugshare (for electric vehicles).

Look at the conditions along your entire route, especially for long drives. Winter road conditions can change drastically in a short amount of time and vary along your route. Pay close attention to high elevation sections of your route because they will experience icy conditions sooner than lower elevations.

If your insurance company provides an app, download their service to make it easier to access policy and roadside assistance information. You should also pre program important phone and policy numbers into your phone in case you do not have mobile data access while driving.

Before long drives, or traveling through a rural area, let a loved one know your route and ETA in case of an emergency.

## WINTERIZE VEHICLE



Most car manufacturers recommend keeping up to date on routine maintenance year round. Giving your vehicle a pre-winter tune up is a great way to reduce your chances of being stuck on a snowy roadside with car trouble. Let's walk through a few steps you can take to give your vehicle a head start before winter sets in.

### I. GET TO KNOW YOUR VEHICLE

Acquire and familiarize yourself with your vehicle's manual to make sure you know about it's winter safety features, such as: traction control, 4-wheel or all wheel drive (remember, these do not make you or your car invincible!). Check your vehicle for recalls and schedule appointments to take care of recalled parts and systems. If you rent a car during the winter, make sure to ask the rental agency about what winter driving features are available.

Consider purchasing your vehicle's [Chilton Guide](#) to help you become even more acquainted with your vehicle and how to maintain it.

## 2. SERVICE TUNE UP

If your skill set allows, you can perform most of these checks with the assistance of your vehicle's manual and Chilton Guide. If not, ask a trusted mechanic for a pre-winter tune up and replace parts as needed. Here are some things to check:

### **Hoses and connections**

Look for wear, tear, and leaks (don't forget to check under your vehicle for evidence of leaks).

### **Belts**

Physically inspect and listen for wear in your belts. If they are in bad shape, replacing them before they malfunction can save you a lot on engine repair.

### **Battery Health**

Your battery's capacity is diminished during cold temperatures so look over the battery itself, cables, fluid, and connection terminals. Some batteries come equipped with a meter that tells you how much voltage remains in your battery. If you do not have the ability to conduct a load test at home, most auto part stores offer battery load testing services.

### **Electric Battery Health**

All batteries operate at a lower capacity in cold conditions. Additionally, electric vehicles do not divert heat from the engine compartment to heat your cabin like an internal combustion engine. That means your batteries are working extra hard to keep you warm. Be vigilant about recharging your vehicle any time it is not in use. If possible, park your car indoors during the winter to help your battery work more efficiently.

### **Heater**

It may have been months since you have used your cabin heater. Check your heater and defrost settings to make sure they are functioning properly. Take the opportunity to also replace your cabin air filter.

### **Spark Plugs**

Replace the spark plugs to keep your engine firing properly during the winter.

### **Washer Fluid**

Fill your washer fluid reservoir with a mixture that performs below your local temperatures. If you are traveling to an even colder region, adjust your mixture as needed before you set off.





## **Oil**

Regular maintenance like oil changes reduce the likelihood of car trouble during the winter

## **Anti-freeze**

It is extremely important to have the correct antifreeze mixture to protect your radiator. Use your owner's manual for recommendations, and top off your fluid levels.

## **Lights**

Because of reduced daylight hours and white out conditions, functioning lights are even more critical during the winter. Check your headlights, brake lights, turn signals, interior lights, and hazard flashers to make sure they are all working. Clean your headlights to improve your visibility. You will want to be able to run your lights even during the day because winter weather washes out visual markers.

## **Windshield**

Chips and cracks can worsen during icy conditions because water expands as it freezes. Replace or repair problems before a freeze, especially those that will impede your visibility while you drive. Take the time to replace your wiper blades as well.

## **Tires**

Check your tire thread to make sure you are not close to the wear bars. Replace and rotate tires as necessary. Remember that low temperatures decrease the air pressure within your tire, so keep a pressure gauge in your vehicle to check levels no matter where you are. If you live in consistently high snow or mountainous areas, consider switching to snow tires when necessary (just remember snow tires decrease your MPG). If you plan to regularly visit chain restricted areas, keep chains with your vehicle at all times. Inspect your spare to make sure it is in good condition in case you need to use it.

## **Brakes**

Check your entire braking system (fluids, assemblies, lines, and hoses). Some vehicle maintenance shops offer free brake inspections and then only charge for repairs if necessary.

### **PRO TIP!**

MANY INSURERS OFFER  
INCENTIVES, LIKE WAIVED  
DEDUCTIBLES, FOR  
WINDSHIELD REPAIR





# WHILE YOU DRIVE

In an ideal world, none of us would have to drive during a winter storm. However, staying home and off the roads during snowy and icy conditions is not always possible. Here are some tips that can help you for those circumstances where you find yourself on the road during winter storm conditions.

## PAD YOUR TIMELINE



No matter what time crunch we find ourselves in, Old Man Winter tends to demand a slower time table. Giving yourself extra time from start to finish will alleviate some winter driving stress.

For starters, make time for removing snow and ice from your car before you need to leave. Clear your windows first, then address any other heavy snow deposits on your car that can dislodge while driving and block your windshield (like the hood or roof right above the windshield).

Don't try and save time by leaving your vehicle unattended while it warms up; car thieves love that!

Once you have set off, assume that your travel time will take longer than usual due to slower traffic, possible detours, snow plows, and snow accumulation.

## DECREASE SPEED



The number one rule for winter storm driving is **slow down**. Decreasing your speed by 10 mph is a good starting point, but under extreme conditions should be taken down even further. Just because you feel comfortable driving in the snow, does not mean other cars around you have the same expertise. The faster you are going, the less reaction time you will have when you encounter ice, a spun out vehicle, a snow plow, etc.

Overall, your acceleration and deceleration should both slow down. Operating with a lead foot on either the gas or brake pedal can destabilize your car and make your movements more unpredictable for the drivers around you.

Remember, your speed should be determined by the road conditions alone, not the posted speed limit.



## TAKE CONTROL



Winter driving demands that you be in complete control of your vehicle at all times. Even if road conditions don't look hazardous, slippery ice can pop up when you least expect it. Save your cruise control driving for warmer weather.

The same goes for auto-pilot functions, no matter how cutting edge. It is best to leave the cruise control and autopilot functions off during the winter so you are ready to react quickly when the occasion calls for it.

## BE EXTRA ALERT



There are many additional seasonal hazards that are not present during the warmer months. Running your travel app while driving can help warn you of some of these hazards en route such as road closures, accidents, etc. Here are some examples of seasonal hazards that you need to watch out for:

### **Black Ice**

Keep a vigilant eye out for black ice, especially in shady areas. Freeze thaw cycles deposit thin, transparent sheets of ice that blend in with the pavement. Black ice is especially dangerous because you often don't know it's there until you are right on top of it. If you encounter black ice, immediately let off both the gas and the brakes. Keep your steering wheel as straight as possible and only make gentle adjustments to avoid fishtailing while your car regains traction.

### **Loose Aggregates**

Some municipalities use non-soluble aggregates, like sand and gravel, on the road to try and improve tire traction. Since these solids don't melt, you will need to pay extra attention to airborne aggregates that get flipped up and can damage your windshield. Slow down through areas with additional aggregates on the road.

### **Animals**

The increased presence of salt on the side of the road can create a salt lick that attracts wildlife (such as birds, deer, moose, and other grazing animals). More wildlife near a roadway naturally increases the likelihood of animal/vehicle accidents. Especially with reduced daylight hours, make sure you are traveling at a safe enough speed to watch out for additional animal activity.





Knowing how to safely drive alongside our brave snow fighters reduces accidents for everyone on the road. Here are some helpful driving safety tips to help you brush up on your [snow plow etiquette](#).



## Visibility

Visibility naturally decreases during snowfall, making hazardous driving conditions even more dangerous.

- Turn on your lights in order to see and be seen.
- Never drive through the “snow cloud” coming off a plow (snow clouds can conceal the true dimensions of a plow, nearby vehicles, and other hazards on the road).
- Drive where you have the greatest visibility (remember that the road behind the plow is much safer than the road in front of the plow).
- Don't camp out in a snow plow's blind spots (snow plows have much larger blind spots than other vehicles and just because you can see them, it doesn't mean they can see you).

## Speed

As was mentioned earlier, icy conditions greatly increase stopping distances, so watching your speed is essential.

- Slow down! (Remember that ice and snow reduce traction between your tires and the road surface).
- Snow plows typically travel under 45 miles an hour (depending upon the road conditions) so slow your speed accordingly to drive safely around them.
- Be patient, remember that the safest road surfaces will be behind the plow and not in front of it (resist the temptation to pass unnecessarily).

## Passing

- Never pass a snow plow on the right (snow is being plowed to the right side of the road and snow plows have a larger blind spot on the right)
- Allow yourself plenty of room ahead of the snow plow and do not cut back into the snow plow's lane too quickly (remember the blade extends far in front of the plow).
- Change lanes carefully because snow plows can create ridges of snow between lanes that can be hazardous to drive over.

## **Distance**

Snow plows require a larger bubble of safety around them than other vehicles.

- Stay a safe 10 car distance behind snow plows (while operating, snow plows are dispersing salt and can kick up chunks of ice or other hazards).
- Remember during icy conditions, your vehicle's stopping distance is much greater.
- When you see a plow approaching from the other direction, move as far away from them as possible (move over farther than may seem necessary because snow can conceal the true size of the snow plow blade).
- Don't crowd the plow (snow plows are much wider than other vehicles and can have wings or attachments that extend far beyond the actual plow).
- Snow plows turn around and exit the road frequently and without warning, so give them plenty of room to operate safely.

## **Echelon Plowing**

Echelon plowing is when snow plows operate side by side across multiple lanes of a freeway to clear large areas at once. For high traffic areas, this is an extremely efficient way to get the most important arterial roadways open as quickly as possible.

- Never try to pass an echelon plowing operation.
- Never try to drive between echelon plows (snow from the lead plow is being passed to the following plows).
- Be patient and follow echelon plows from a safe distance (it may take you longer to get where you are going, but you will at least get there safely).

## **Other General Snow Plow Safety**

Here are a few more general safety guidelines for driving around snow plows:

- Turn off cruise control and other auto-driving features (it is essential you maintain full control of your car during hazardous driving conditions).
- Avoid sudden braking, acceleration, and maneuvers (slow and controlled movements will help you avoid skids and help other drivers see and understand your intentions).
- Remember snow plows are a lot heavier than regular vehicles, especially when loaded with salt (and will have comparatively delayed reactions).
- Stay alert (just because you are being safe, it doesn't mean other drivers around you will take the same precautions).
- Watch for stranded or spun out vehicles (unlike during normal conditions, these cars may not have had a chance to move to the roadside).



## ROAD EMERGENCIES



Use the following tips to help yourself or others that are stuck in a snowy situation.



### ***Exhaust Pipe Clearance***

If you are on the roadside during the winter for any reason (mechanical trouble, stuck in a snowbank, helping another vehicle), one of the very first things you should do is make sure your exhaust pipe is clear of ice and snow. Snow deposits are typically deeper on the side of the road and can easily block your vehicle's exhaust. If your pipe is obstructed, carbon monoxide will begin to seep into the car's interior and create a life threatening situation. Use your car shovel to remove snow anywhere near your tail pipe so it doesn't shift unexpectedly while you are working or waiting.

### ***Call For Help***

Use the resources available to you depending upon the severity of your emergency and your location. Contact 911, your roadside assistance provider, towing

services, or nearby friends and family as the situation dictates. Make these calls immediately before your phone battery depletes.

### ***Increase Your Visibility***

Snowy conditions wash out visual markers on the road. Make sure other drivers can see where you are by using your vehicle's hazard flashers, emergency light sticks, and other reflectors as you work to free your vehicle. Consider placing a few of these light sources up high on your vehicle (like your roof) if the snow is especially deep. Using bright visual markers will also help those coming to your aid find you easier.

### ***Avoid Overexertion***

Any physical activity during cold temperatures is much more demanding on your body than you realize. Take warm up, snack, and drink breaks in your vehicle to rest and prevent your situation from worsening. Use your emergency car kit supplies responsibly to keep yourself warm, fed, and hydrated.

## Carefully Try To Free Your Vehicle

If your vehicle is stuck in the snow but still functioning, start working to free your vehicle. Dig out around your vehicle as much as possible using your shovel. Focus especially on areas surrounding the tires. Use your granular deicer to help melt ice and restore traction around your wheels.

Once you have cleared snow away from your vehicle, gently rock your vehicle back and forth using drive and reverse to dislodge it from compacted snow. Avoid revving the accelerator (fast spinning wheels often complicate your situation and dig a deeper hole for your car.)

## Stay With Your Vehicle

If you are unable to free your vehicle by yourself, you can still use it as a temporary shelter and make it easier for helpers to locate you. This is especially important if snow is still falling, when it is easy to become disoriented and lose sight of your vehicle. If snow is still accumulating, continue to check your car's tailpipe to make sure it stays clear of obstruction.

## Conserve Fuel and Battery Life

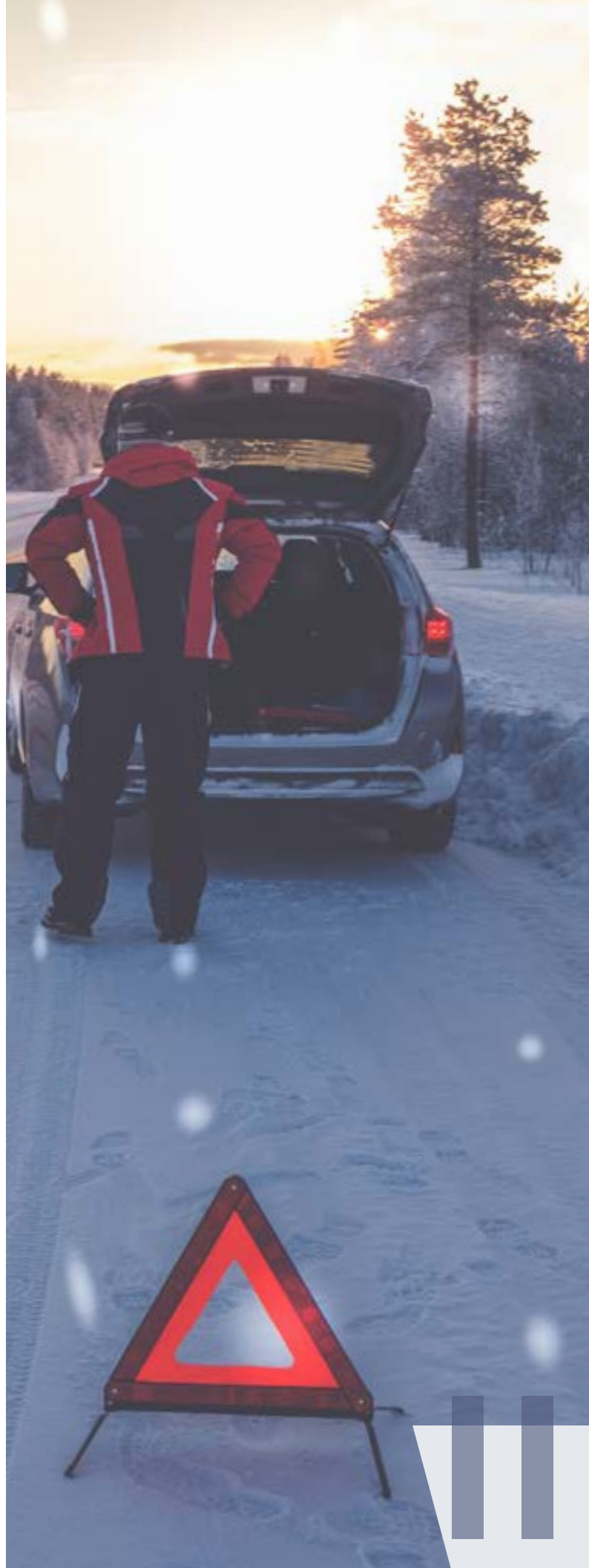
As you wait for assistance, use gas and electronics sparingly as needed. Save your phone for calls only and use your external charger from your emergency car kit. Use your insulation blankets and air activated hand warmers first before using fuel to warm your car's cabin. To prevent [hypothermia](#), [frostbite](#), and other winter health concerns, only turn on your car every now and then to warm up.

## Winter First Aid Basics

Remove wet clothing immediately and replace with dry layers if possible, especially on your feet. If you experience hypothermia symptoms, warm the center of your body, chest, neck, and head first. If you are with someone, direct skin to skin contact is the most efficient method of heat transfer.

Once your core temperature improves, your body will pump heat into your extremities (ears, nose, hands, and feet). These areas are the most susceptible to frostbite. Use your core areas, such as your armpits and abdomen to warm your extremities. If you feel symptoms of frostbite, do not put weight on or massage the affected area to prevent further tissue damage.

Only use slow and gradual warming methods. Cold temperatures numb nerve receptors, so quick heating methods can often cause burns and other injuries.





# AFTER YOU DRIVE

Now that you have reached your destination, there are a few steps you can take to help your vehicle recover from its journey.

## RESTOCK SUPPLIES



If, on your journey, you used any items from your emergency car kit, replenish the necessary supplies. Focus especially on food, water, and heating supplies. Some items are reusable, if they were not damaged, and can be repacked as is.

Replace any items that were damaged (such as torn insulation blankets) so you can be fully stocked for future travels. If you used any of your ice melt, make sure to replenish your storage container. Dry and replace your emergency warm clothing reserves.

## MAINTENANCE CHECK



Stay on top of necessary vehicle maintenance after your arrival. Top off fluids that were used on your drive (especially your washer fluid). If you used any vehicle maintenance equipment (such as jumper cables, trickle chargers, spare tires, tire irons, other tools) make sure you have stored them back where you can find and access them easily.

Treat your car to a wash occasionally throughout the winter, especially after a long trip. Pay particular attention to wheel wells and your vehicle's undercarriage, where ice buildup can trap debris and salt deposits.



# DEICER & ROAD SAFETY

Purchasing the right deicer for your emergency car kit can take a lot of the stress out of winter driving. **Nature's Blend** from **Ice Slicer** puts the power of high performance road salt right at your fingertips.



## **Melts faster, lasts longer**

Out performs white salt by producing brine faster and prevents refreezing for longer



## **Reduces slips and falls**

Naturally coarse granules restore traction without additional aggregates (like sand and gravel)

## **Less corrosive**

Up to 70% less destructive to concrete and metal than white salt alternatives



## **Plant safe and eco-friendly**

Releases fewer chlorides into your yard, plus contains 14 out of 17 essential soil health minerals



## **Safer for kids and pets**

OMRI certified organic blend that contains no additives and no harsh chemicals



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