

venson

Fleet Solutions for Business

Winter Driving



Preparing for winter – the options for keeping vehicles moving

At this time of year it is usual to see articles in newspapers and online talking about the various solutions for keeping vehicles on the road during cold and wintry conditions.

We believe that it is important that our fleet customers have all the facts to hand when considering managing their fleet in adverse weather. That's why we have produced this guide, providing practical advice about driving in winter and information on the products that are most commonly talked about.

Practical Advice

- Getting up at least 10 minutes early will give you time to prepare the vehicle.
- Don't drive off with only a tiny hole cleared in your windscreen. Clear all windows of snow and ice using a scraper and de-icer. Ensure that you also clear snow from your bonnet and roof as this can fall onto your windscreen obscuring your view as well as causing a hazard for other drivers.
- Besides an ice scraper and de-icer, it's worth carrying a mobile phone with fully charged battery and an in car charger, torch, first-aid, tow rope, blankets, warm coat and boots, jump leads, snow shovel, warning triangle, an old sack or rug (to put under the wheels if you do get stuck) and water repellent spray.
- Plan routes to favour major roads which are more likely to have been gritted.
- Put safety before punctuality when the bad weather closes in. Allow extra time to reach your destination as bad weather can cause unexpected delays.

Driving in Snow and Ice

- Remember stopping distances are 10 times longer in ice and snow.
- Gentle manoeuvres are the key to safe driving.
- Wear comfortable, dry shoes; cumbersome, snow-covered boots will slip on the pedals.
- Select second gear when pulling away, easing your foot off the clutch gently to avoid wheel-spin.
- When approaching a hill wait until your path is clear of other vehicles before proceeding, this will prevent you needing to stop on an incline. Try to maintain a constant speed, choosing the most suitable gear well in advance to avoid having to change down on the hill.
- When driving downhill, reduce your speed and use a low gear. Try to avoid using the brakes. Leave as much room as possible between you and the car in front.
- Always apply brakes gently. Release them and de-clutch if the vehicle skids.
- If you have an automatic, then under normal driving conditions (motorways, etc) it's best to select 'Drive' and let the gearbox do the work throughout the full gear range. In slippery, snowy conditions you can make driving much safer by selecting '2', which limits the gear changes and also makes you less reliant on the brakes. Many modern autos have a 'winter' mode which locks out first gear to reduce the risk of wheel spin. Check the vehicle handbook if you're not sure.
- If you do get stuck, straighten the steering and clear the snow from the wheels. Put a sack or old rug in front of the driving wheels to give the tyres some grip. Once on the move again, try not to stop until you reach firmer ground.



Floods and Standing Water

- Only drive through water if you know that it's not too deep for your vehicle.
- Drive slowly and steadily, allowing oncoming traffic to pass first. Test your brakes as soon as you can after leaving the water.
- Don't try driving through fast-moving water, such as the approach to a flooded bridge, your vehicle could easily be swept away.
- Driving fast through standing water is dangerous, tyres lose contact with the road and you lose steering control in what's known as 'aquaplaning'. Watch out for standing water, trying to avoid it if you can, and adjust your speed to the conditions. If you do experience aquaplaning, hold the steering wheel lightly and lift off the throttle until the tyres regain grip.
- Driving fast through standing water is inconsiderate, driving through water at speeds above a slow crawl can result in water being thrown onto pavements, soaking pedestrians or cyclists. You could face a hefty fine and between three and nine penalty points if the police believe you were driving without reasonable consideration to other road users.
- Driving fast through standing water can cause expensive damage, the air intake on many vehicles is low down at the front of the engine bay and it only takes a small quantity of water sucked into the engine to cause serious damage. All engines are affected but turbo-charged and diesel engines are most vulnerable.
- As you drive slowly through standing water keep the engine rev's high by using a lower gear, otherwise water in the exhaust could damage the catalytic converter.
- If you break down in heavy rain don't prop the bonnet open while you wait for the patrol to arrive, the engine will be more difficult to start again if the electrics are rain-soaked.

Antifreeze

- The majority of modern cars use long-life antifreeze, and it is absolutely essential that you don't mix these with other types as this can cause a sludge to form in the engine. If you're not sure what type of antifreeze is in your vehicle, take it to a dealer or call your Venson Driver Hotline number.



Vision

- Improve vision significantly by making sure that the windscreen is clean, inside and out. Scratches, abrasions and chips on the outside can also worsen the dazzling effect of the sun. If your vision is obscured through dirt, snow or even sticker-infested car windows you could face a hefty fine.
- Use air conditioning for faster demisting and to reduce condensation on cold windows.
- Check windscreen wipers regularly and replace if necessary.
- When parking your vehicle in freezing conditions, always ensure that wiper blades are switched to the off position. If you don't and the blades freeze to the screen, you could damage the blades or wiper motor when you turn the ignition on.
- Windscreen washer fluid should be topped up and treated with a proprietary additive to reduce the chance of freezing in frosty weather. Don't use ordinary engine antifreeze as it will damage paintwork.
- Use a good quality de-icer and a proper scraper to clear glass, using a specially formulated windscreen washer liquid rather than soapy water is beneficial at this time of year.

Visibility

- Check that all bulbs are working and that headlights are clean and aimed correctly.
- You must use headlights when visibility is seriously reduced. You may also use front or rear fog lights but these must be switched off when visibility improves as they can dazzle other road users and obscure your brake lights.
- Keep the number plates clean too. You can be fined if they are dirty and illegible.

Tyres

One of the key factors in keeping your fleet on the road at this time of year is the choice of tyres used on your vehicles. With a wide variety of options available the information provided below should help you to decide which is the best solution for your fleet.

Cold Weather Tyres

What are cold weather tyres?

These tyres are different from the tyres we're all used to using all year round because they use a tread rubber compound (high silica content) and tread pattern specifically designed to retain flexibility in low temperatures (below +7C) and give good braking/traction performance on snow/ice as well as on wet roads in cold conditions. The sidewall of a winter tyre will be marked with a symbol showing a snowflake or snow-topped mountains.

Cold weather tyres are now produced by most of the main manufacturers.

The tyres must be fitted in sets of four. Fitting only one pair will significantly affect the balance and stability of the car and is not something we would recommend.

Additionally, as cold weather tyres are not really suited to all year round use - summer tyres will give better performance when temperatures are higher and roads dry – you will need two sets of tyres to cope with all year round driving.

Should I use cold weather tyres?

Cold weather tyres make sense for drivers living and/or operating in the more remote areas of the country where winter conditions are likely to be more severe for longer. Through our tyre providers we can offer storage and fitting services tailored to your specific requirements. Limited stocks are available through all tyre manufacturers.



Alternative Solutions

- **All Season Tyres**

As an alternative, drivers could consider fitting so-called 'all season tyres' which also have a high silica content for low temperature flexibility and a tread pattern somewhere between a normal summer tyre and an out-and-out cold weather tyre. Like all compromises they are unlikely to be as good as the best specialist tyre but can be expected to work better on wintery roads than a normal tyre. All season tyres are not widely used in the UK and therefore stocks can be limited.

- **Snow Chains**

These are of limited use in the UK because these should only be used when the road surface is covered in a protective layer of compact snow/ice. Additionally, snow chains can be awkward to fit or remove particularly when the wheel arches are packed with snow and gloved hands are cold and wet. Consideration of health and safety regulations also need to be made if considering allowing drivers to fit this type of winter weather solution.

- **What are tyre snow socks?**

Snow socks are a relatively new technology. As the name suggests, you pull the sock over the wheel and tyre, meaning no additional costs for tyre removal and fitting.

Unlike conventional snow chains, tyre socks have no metal parts. Instead, they are coated with a strong textile surface, which is claimed to optimise grip on the road. You can pull the tyre sock over the tyre fairly easily as long as there is enough room to fit your hand between the top of the tyre and the wheel arch. You'll need to move the car forward or back slightly to fit the sock fully over the tyre. Once the tyre sock is on, it will self-centre on its own as you drive. As there are no metal parts, vibrations and noise are claimed to be relatively low.

Manufacturers suggest you only use snow socks for vital journeys rather than having them fitted for the entirety of the winter period, as travelling at speed on bare tarmac will destroy them. Although they can be used at speeds of up to 50mph, it is strongly recommended that you do travel slower than this. However, if the conditions are bad enough to warrant using snow socks, it is unlikely you will be travelling above 50mph anyway.

Considerations

- **Insurance**

If you are considering cold weather or all season tyres in place of normal tyres then, because the speed index might be lower than the standard tyre specified by the vehicle manufacturer, we would recommend that you talk to your insurer before fitting these tyres to any vehicle.

- **Pricing**

Cost is dependent on the vehicle and tyre brand fitted. For detailed pricing and availability please contact your dedicated Venson Account Management Team.

- **Availability**

We would encourage our customers to register their interest in cold weather tyres as soon as possible. Ideally it is best, although we appreciate not always possible, to make arrangements earlier in the year so that we can provide manufacturers with an indication of likely stock required. We will do our utmost to accommodate your requirements..

Preventative Measures

Regardless of the tyre product you are considering using it is vitally important that you check tyre tread depths and tyre pressures on a regular basis. Tyres should be inflated in accordance with the vehicle manufacturer's specification and you should not be tempted to reduce tyre pressure when there is snow and ice around, it doesn't help with grip and can affect the vehicle's handling.



Considerations for EV's in the Winter

- **Precondition**

Just about every new EV sold today offers preconditioning features. Preconditioning allows the owner to heat or cool the battery and cabin as needed. You should use the precondition function as much as possible, preferably while connected to a 240-volt charging source. By using preconditioning to preheat the battery and passenger cabin, you'll leave with a fully charged and heated battery, plus a warm cabin. Preconditioning allows you to use less of the stored energy in the battery for these functions, which will allow that energy to be used for its main purpose, to propel the vehicle.

You can set the preconditioning to begin every day at a set time, so your car is ready when you leave in the morning. Make sure the car is plugged in while you precondition, because you want to draw energy from the grid to do this, not drain down your battery. You'll also want to be plugged into a 240v level 2 source, as preconditioning will draw more power than a level 1, 120v EVSE will deliver. If you don't have a 240v charging source, the preconditioning procedure may need to dip into the stored energy in the battery, which isn't ideal. In that case, the battery and cabin will be warm, but you may not depart with 100% state of charge.

- **Properly Inflated Tyres**

This might be the most overlooked ways to increase your EVs range in the winter. As the temperature drops, the air in your tyres contracts and the tyre pressure falls. Nitrogen-filled tyres will hold their pressure better than air-filled, but they will also be affected by cold ambient temperatures. Tyre experts say that for every 10 degrees of temperature drop your tyres can lose 1-2 lbs of pressure. Under-inflated tyres create more road friction which will reduce the vehicle's efficiency.

Always make sure to check the recommended and maximum pressure for your tyres, because it's different for every tyre and car. Be sure to check your tyre pressure frequently during the winter, as temperatures can fluctuate greatly in short periods of time. Having properly inflated tyres is an easy way to help maximise winter range.

- **Regenerative Braking**

Using the regenerative braking system on your EV to maximise range is always a good idea. However, it can be an even bigger asset when you really need to squeeze out every mile of range possible. It's also important to note that when the battery is very cold, the regenerative braking system will be less effective. Cold batteries can't accept as much energy as warm batteries can.

Therefore, to minimise the possibility of damaging the cells, an EV will scale back the amount of energy it can recapture from regeneration. This will be particularly noticeable when you first get into an EV that's been sitting in the cold for a while. If the battery is very cold, it may feel like there's no regeneration occurring at all, so be prepared to use the friction brakes more than usual until the battery warms up a bit from use.

- **Use Eco Modes**

Most EVs have a couple of different driving modes, with one of the options called "eco mode" or something very similar. Every EV implements eco mode differently, but this mode generally reduces the amount of power supplied to the drive motor and energy consuming features like the cabin heater.

Another benefit to using the eco modes in the winter is that by reducing the power to the motor, the car accelerates slower, and helps to reduce the possibility of wheel spin. Therefore, even if range isn't an issue, it's probably a good idea to use eco mode whenever driving on ice or snow covered roads.

Reference sources: The AA, Green Car Reports and Which?

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