

Winter Tyres

In this note, one of our members, Ken London has pulled together a few facts about “winter tyres”, snow socks and snow chains and how they can dramatically improve grip when there is snow on the road.



If you read the Autumn 2018 edition of *RoadSmart* magazine, you will have seen that IAM RoadSmart is working with premium tyre brand Continental to improve road safety. To build upon that tyre safety initiative towards the vision of no accidents and the fact that we're rapidly approaching winter, we can all work to improve safety and further minimise the chance of having an accident.

Aberdeen city may not have been subjected to too much snow in recent years but the same, may not be said for parts of rural Aberdeenshire. I'm sure you will all recall the images on Scottish television or BBC Scotland of motorists slithering about or digging themselves out of drifts.

You wouldn't consider walking about in trainers on the snow but would have appropriate boots on. So, it's worth considering fitting your car with the appropriate boots for the cold snowy conditions ahead.

Fitting **cold weather tyres** (often called winter tyres) to all four wheels is probably the best but most expensive option. These tyres are made with a softer rubber compound and which keeps them supple so that they maintain high levels of grip below -7°C , at which temperature normal tyres become hard and much less compliant, consequently losing traction grip. Braking distances on snow or ice will both be much longer.



If you look at the photo on the left of a cold weather tyre, you will see that the tread is also different with 1000's of tiny channels, called sipes cut into the chunky tread. On snow, these sipes bite and provide grip whereas a regular tyre can quickly clog with compacted snow and effectively becomes like a racing slick tyre providing little or no grip on snow or ice. Conversely, the cold weather tyre makes a car less responsive at temperatures above $+7^{\circ}\text{C}$ causing more lateral roll and understeer.

You must fit all four wheels when using cold weather tyres – just a pair for the driving wheels could be dangerous as the different characteristics of cold weather and normal tyres may make the vehicle less stable during cornering.

Of course, your normal tyres won't be wearing in winter just as your cold weather tyres won't be wearing in summer. So, after the initial outlay, you should end up buying replacement sets of tyres less often.

Cold weather tyres will need to be fitted before the snowy or icy weather arrives, say between December and March when the temperature is usually below 7°C in Aberdeenshire, before returning to normal tyres after the worst cold conditions have passed. You should check with your insurance company though, because in the past, some insurers treated fitting them as a modification. Nowadays, most insurers see cold weather tyres as a worthwhile safety improvement so your insurance premium should not be affected.

If you don't fit cold weather tyres, it's worth keeping a set of **Snow socks** in the boot. Sizes match most cars' wheel sizes and are easily fitted to the driven wheels when you come to snow on the road.



Snow socks can help you get home after an unexpected snowfall or getting off your drive to a gritted or cleared road. They are made from textile like material with the fibres at right angles to the direction of travel to help optimise grip as the dry snow and ice will stick to the textile surface. They're not as versatile as cold weather tyres because they must **never** be used on tarmac. A cleared or gritted road surface will rip the textile fibres to shreds very quickly. Luckily, they are just as easy to remove after you come off the snow.



Finally, **snow chains** are another alternative if you don't fit cold weather tyres but there are some restrictions as to their usage. It is illegal to use snow chains in UK if the road is not covered in snow because they will damage the road surface. Also, you must check that the car manufacturer allows the use of chains. Not all do, so you will have to check your car's handbook. They must be fitted correctly as potentially they could fly off causing damage to the car or others. They must also be matched to the wheel / tyre size. Like snow socks, you can only use chains when you reach snow and must remove them when the road is clear of snow. However, they are less easy to fit and remove and often require a special tool.