

Car Care Articles

Why Winter Tires?

Global warming seems to be affecting snow fall year after year, and one would expect that technologies such as front wheel drive, traction control and even four wheel drive would tend to lessen the need for a change of tires. So, do we really need Winter Tires?

The answer is **YES** and believe it or not, more so than ever.

One aspect of the motor vehicle which has not really changed over the past year's, is the contact patch, or the surface area within which our car comes in contact with the road. Even today, the area that each of our wheels comes in touch with the road is not much larger than the size of one of our hands. It really is not much when one thinks about it, and therefore, we want to be able to maximize the traction within this area as much as we can in order to get the most from our tires.

The other aspect not often mentioned is temperature, and that our all-season or summer tires become drastically less effective once the mercury falls below 7 degrees Celsius.

There are three components that make up the composition of a winter tire, the tread pattern, the sipes or lacerations in the tread and finally the tread compound. Although the first two components aid in our car's traction on snow and ice, it is the latter of these components that one could say is the most crucial, why, because it affects our automobile's performance in the snow and on ice, as well as on wet or dry surfaces. Yes, you read correctly, I did say dry!

The rubber compound used in winter tires is very different to the tires that we use the rest of the year, and they therefore react differently once the winter months are upon us. Simply put, if you put a winter tire and an all season tire in the freezer for a day or so, the result would be that your all-season tire tends to look like and feel like the pot roast you have next to it, while the winter tire remains flexible and soft. If we now apply these same principles of physics to our vehicle, would you rather drive on a flexible, pliable tire that is able to react





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under braking and handling in temperatures under 7 degrees or on four blocks of ice? I assume by now that you know where I am headed with this, but here are two very important facts to be noted;

- 1) From November through April, our average Temperature in many parts of Canada is below 7 degrees Celsius.
- 2) Your car's braking distance decreases by 40 to 60% when winter tires are installed during these months.

The best way to look at this is that below 7 degrees Celsius;

Winter tires = Flexible Tread compound = High grip

Summer /All season tires = Hard Tread compound = Low grip

So, in conclusion, the reason to install winter tires should be that of safety, safety of the driver, the passenger and all the rest of us on the road, and they should be mandatory between November and April. They provide;

Excellent driving-behavior on dry roads together with the best performance in winter.

For more information about vehicle maintenance and safety visit www.carcarecanada.ca.