

# AVOID WINTER TIRE UNDERINFLATION HAVOC



Ralph Seekins

The latest -30 and colder snap caused a lot of automobile havoc around the Interior, not the least of which was a huge number of flat tires on vehicles sitting outside in the cold. Sadly, most of the flat tire havoc could have been prevented with a simple check and adjustment of tire pressure on a regular basis.

Why? Well, tires inflated with compressed air generally lose about one pound per square inch (psi) per month for a number of reasons. So, assuming a uniform temperature, if you only check and properly inflate your vehicle's tires once every 6 months, you may find them under-inflated by about six psi. However, as we all know, there is no such thing as a uniform temperature over time in Interior Alaska. Our radical seasonal temperature variations create another very big havoc factor related to tire pressures.

Tire pressure, using compressed air, will also change about one psi for every 10 degrees Fahrenheit change in temperature – higher for hotter, lower for colder. So a tire inflated correctly at +60F will be

10 psi under- inflated at -40F. And, if the pressure was correct in August, it will have lost an additional four psi by December. That 16 psi under-inflation can cause a rubber tire sitting out in the cold to shrink away from the metal wheel enough to let all the air escape and, BINGO, the vehicle isn't going anywhere until the tire is re-inflated.

Even worse is when the tire pressure is very low and the driver gets in and starts to drive away and the wheel spins inside the tire. Instantly, all the air escapes, the tire goes flat, and the spinning wheel damages the tire bead (where the tire attaches to the wheel) bad enough that a new tire is required. Every tire retailer sees this time after time during our cold winter seasons.

So, how can you help avoid these situations? First, make sure you check tire pressure at least once a month. You can do this yourself with a simple tire pressure gauge available at all auto parts stores and at some big box stores. A quick adjustment can do a lot for cold weather safety as well as for ride, handling, fuel mileage and tire life.

Another relatively new development is the use of nitrogen gas rather than compressed air in your vehicle tires. Nitrogen doesn't escape through rubber

compounds as easily as does compressed air and doesn't appreciably change in volume with temperature fluctuations. That's why nitrogen is used in modern aircraft tires in both civilian and military applications where ambient temperatures can change up to 150 degrees in a matter of minutes. And, today, reasonably priced nitrogen is available in most retail tire stores and automobile dealerships across the country. I routinely change to nitrogen in our family vehicles and have found it trouble free in all of them. And, because my truck can experience a 70 – 100 degree temperature change from inside the garage at night to sitting outside at work in the winter, I feel very comfortable about the nitrogen-provided stable tire pressure.

If you have any questions, feel free to stop by our QuickLane Tire and Auto Center. We'll be glad to show you what your tire pressure should be and, as always, we'll be glad to adjust your tire pressure, no matter what make or model, for free.

As with all things automotive, if you have questions as to how to best equip or properly operate your vehicle in sub-arctic and arctic environments, it is in your best interest to consult with the local dealer franchised to sell your brand of vehicle.

***Ralph Seekins has more than 42 years' experience in the automotive industry. He started as a mechanic, worked in sales, and for the past 36 years, has been the owner of Seekins Ford Lincoln.***