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Sir,

The tire inflation issue begins with a flawed procedure for tire pressurization. We need to establish proper base line inflation procedure.

Tire failures have several factors that independently do not constitute a potential failure, but together can, and under the right operating conditions yield catastrophic tire failure.

This coupled with a slightly higher than optimum center of gravity in some vehicles can cause a startled driver to overreact and rollover.

#### Factors

1, Tire size, (volume) as a pressure vessel; SUV wheels have increased in diameter and Profile, increasing the overall compressed air volume.

2, Tire operating demands, stresses exerted from the vehicles operation; Vehicles in General have more power and have better handling capabilities, which translates to Higher tire operating stress.

3, Operating ambient road conditions; There are more high speed roads in desert and Warmer climate conditions (due to the proliferation of air conditioning) that offer more Hot road medium for failure.

4, Tire inflation procedure; Inflation Requirements are handled in a vacuum to the physical principals that are varying any baseline pressure requirement. For example the most motor Co. Web Sites offer Inflation Requirements that ignore ambient air conditions and tire temperature when initially inflated.

The problem is, as I am sure most know, air is not a perfect gas, and all of the care that is taken to ensure proper tire inflation is flawed if we do not consider, as a minimum, the Ambient Air Temperature. Which will also reflect the tire temperature at the time of pressurization, and possibly the air temperature being used to pressurize the tire. I suspect that the compressed air temperature could be higher than ambient due to the heat of compression even if an air drier and storage tank are used.

Certainly air has other variable properties such as relative humidity for one, but suffice it to say the Venezuela type tire incidents do not occur in Alaska.

Just having moved to Southern California from New Hampshire, I am keenly aware of the ambient air change in everyday life.

I was watching a tire installation technician carefully work on a near 90°F day and installing tires, just as if I was back in NH watching on a near 40°F day.

Although New Hampshire summers have warm days, it does not have the other conditions I have noted for extended periods of time.

The key to the problem is tires should be inflated with an adjustment for the ambient air temperature, in addition to if the tire is warm (operating temperature), or cold, idle for two hours or more.

As a minimum, a simple chart could be immediately generated that allows for the ambient conditions at the time of initial inflation.

Using 70F as a base tire ambient inflation temperature a scale can be developed that would offer an inflation adjustment pressure.

A recommended tire inflation value is at some ambient base line condition, you must specify it, or your any inflation direction are incomplete. We propose a study be done to determine this scale, that may also vary based on tire size.