

One topic that continues to be a talking point at rallies and in our Service Center is trailer tires. Everyone has a view about tires, what ones are the best, and opinions continue to vary widely. My contention is that if one tire was markedly better than any other there would only be the one tire (or Brand) being purchased. While the search continues for the “best” ST trailer tire; I thought I would share some things that I have been researching about trailer tires and what can affect their longevity.

## ST Trailer Tire Features (Special Trailer (“ST”) Tires)

First, what is an ST trailer tire? ST stands for Special Trailer Service. ST tires have been specifically made for trailers. Special trailer service tires feature heavy-duty construction and accommodate higher inflation pressures to provide the load capacity necessary to match many trailer applications and payloads.

They have larger polyester cords than other trailer tire models, greater strength and greater resistance to the elements. Their stiffer sidewalls help control sway for enhanced towing stability and they offer more bruise resistance than typical passenger tires.

ST trailer tires have a maximum speed rating of 65 miles per hour and on the average can be used for three to five years.

## Bias Ply vs. Radial Tires trailer tires

When it is time for new tires for the trailer, it is better to invest in radial tires. While bias ply tires are safe and well made, they do not provide as smooth a ride as radial tires. Bias ply tires also tend to wear out quicker and use more fuel than radial tires. By contrast, radial tires are fuel efficient, create less friction and can be used in any type of weather.

## Air Pressure in Tires

Did you know? Low air pressure will decrease the life of the tire by approximately 25% (low air pressure creates heat due to increased flexing of side walls) and decrease gas mileage by 5%. Low air pressure can also increase tire wear by 10%.

Tires can lose one pound per square inch (psi) per month under normal conditions. Additionally, tires can lose 1 psi for every 10° F temperature drop. Check air pressure monthly and routinely (including your spare).

Never release air from a hot tire in order to reach the recommended cold tire pressure. Normal driving causes tires to run hotter and air pressure to increase. If you release air when your tires are hot, you may dangerously under inflate your tires.

Tires should sit at least 3hrs. after driving before checking for cold tire pressures.

If you must add air when your tires are hot, add four pounds psi above the recommended cold air pressure. Recheck the inflation pressure when the tire is cold.

According to guidelines put out by the Rubber Manufacturers Association (RMA), any tire that has been run at less than 80% of recommended air pressure for the load it is carrying should be inspected for possible damage.

**For proper tire inflation** know your tire’s load carrying capacity. Under-inflated tires can cause “excessive wear on the outer edge of the tire and heat build-up.” When inflated too low, the tire has more room to flex over bumps, rocks, rails, and road, with each flex adding an opportunity for your tire to become damaged

Over-inflated tires on the other hand can cause excessive wear on the center of the tire, leaving the tire more vulnerable to damage from sharp corners, objects, or to a break in the tire itself. This can lead to a tire blowout. Filling a tire too full also causes the rubber to be taut and increasing the likelihood of the rubber breaking rather than bending over the road.

## Heat affects tire performance

The amount of flex or heat generated in a tire will increase the risk of damage to a tire. Heat damage is not necessarily instantaneous. Excess heat will cause the compounds in the tire to work out of the tire prematurely leading to what is referred to as “dry rot.” Tires suffering heat damage previously may appear to fail for no apparent reason later in their life.

### **The factors directly contributing to the amount of heat generated through tire flexing are:**

Size of Load being carried, Speed you are driving, Distance traveled, Inflation Pressure of tire, Tire Construction/Rubber Compound and the ambient temperature it is being operated in or on (such as hot asphalt).

### **The hotter a tire runs the less efficient it becomes and the more susceptible it is to damage.**

**When a tire runs hot:** Tire wear rate increases, Tires are more prone to cutting, Heat increases the rate of casing fatigue (dries out tire compounds), it increases the chance of heat separation, and it increases the chance of tire burst, the greater rate of repair failure.

When researching for information on tire failures the two main topics that keep coming up are, damage from the heat that can be generated in tires and inflation pressures, both under and over inflation. A tire can look perfectly normal but may have suffered internal damage.

**Summary:** The above information is some of what is available from various tire manufacturers concerning tires and their enemies. So far I have not found any information on the “perfect tire”. I do believe if we understand more of the things that affect tire life we have a better chance of traveling safely while Airstreaming.