

Correct Tire Pressure



by John Hoffen

TIRE LOAD AND INFLATION:

Many problems with tires result from insufficient attention to ensuring tires have the CORRECT air pressures. Tires are designed to have an optimal deflection (the amount the tire compresses when loaded), which is controlled by the load and air pressure. One of the simplest ways to get the best out of tires is to have the correct air pressure. This affects the tread profile shape and contact pressure across the tread surface. Any change in air pressure will alter how the tire will function on the vehicle.

This is very simple in cars, SUVs and pick-ups as Federal Motor Vehicle Safety Standards require the vehicle manufacturer to display a placard on the vehicle indicating the correct tire size or sizes and air pressures recommended for that particular vehicle. This is usually found inside the glove box draw or on one of the front doors or jamb. Sometimes there is a different air pressure recommended for the front and rear tires. It is essential that you heed this differential, as it is the manufacturer's way of fine-tuning the vehicle to give the best steering and safe handling.

When towing, some of the weight of the trailer is supported by the towing vehicle's rear tires (tongue weight). An increase in air pressure (on the towing vehicle's REAR tires only) of up to 10% may improve handling, but **NEVER exceed the maximum air pressure** allowed for any tire, as indicated on the sidewall of the tire.

All tires by law must have molded on the sidewall the MAXIMUM ALLOWED load carrying capacity and maximum air pressure for the tire. For example it may say "Max load 1985 lbs at 50psi" (pounds per square inch). This means that 50psi is the maximum air pressure, which should be in the tire if it is carrying its maximum load of 1985 lbs. It is not necessarily the correct running pressure. **This maximum load and air pressure should never be exceeded**, except for specific specialized use approved by the tire manufacturer. Additionally, **NEVER run any tire below the MINIMUM air pressure** as indicated in the tire's load/inflation table, however light the load.

LIGHT TRUCK TIRES (LT):

It is not possible to have a specific air pressure for tires when in use on a trailer, because the load on the tires is generally different for each trailer. It is necessary to find the weight being carried by each tire to obtain the correct tire air pressure. Tires can be overloaded in two ways, by not having sufficient air pressure, known as "overload by underinflation" or by having a tire on the vehicle whose maximum load

and maximum air pressure is insufficient to carry the load, known "as overload proper". Some LT tires of the same size have extra load carrying capacities available, which allows them to carry a higher load at a higher air pressure if necessary. It will not improve tire life and durability to buy "Extra Load" tires if the higher loads are not being carried.

These "Extra Load" tires are marked Load Range C (LRC), Load Range D (LRD) or even Load Range E (LRE). The higher the letter the more load the tire can carry. The standard tire is usually Load Range B (LRB) though not necessarily marked as such. Some metrically marked tires use an ISO marking (international standards organization) called Load Index; the higher the number the greater the load capacity of the tire.

To find the correct air pressures for your tires go to the Load and Inflation tables and check for the size of tire on the trailer; then calculate the maximum load the tire is carrying. (To find the maximum load, include payload and trailer weight minus tongue weight, and divide by the number of tires on the trailer). This gives the load per tire. Above the indicated load weight in the tables is the correct air pressure. Always round up to the next highest weight, when reading the tables. Note: If you have dual tires the carrying capacity of the tires across the axle is reduced due to the uneven distribution of weight across the axle. This is noted in the load tables.

IMPORTANT: Many tire users look at the maximum load and air pressure molded on the tire sidewall and run this maximum pressure. This may be harmful to the tire as overinflation can affect the tire's performance and safety. It reduces ground contact area, reduces grip and increases casing fatigue, as well as giving the trailer and load a harsher ride. Remember! **NEVER** go below the minimum air pressure shown in the load/inflation tables, even if the load is lighter than the minimum calculated load. Tire pressure and load carrying tables can be found on most tire manufacturer's web sites or contact the tire manufacturers authorized dealer.

Correct air pressure is the most important factor in safe running and optimal performance of tires. **Tire pressures should always be checked cold**, as air expands when the tire warms up. It generally takes about three hours for a tire to totally cool and it will start to heat up again even if driven for 1 or 2 miles This is normal and expected. **NEVER, NEVER, bleed out air from a hot tire**, because when it cools the air pressure will now be below the correct pressure; this will cause the tire to run even hotter. A good rule of thumb is: if a tire's air pressure has risen more than 10% from its correct cold air pressure, it may be overloaded or under inflated, and you

should re-check the pressure in the tire, when cold. It could be an indication of a slow leak. Always use a good quality metal valve cap as this protects the valve core and reduces the possibility of a slow air leak from the valve stem.

Remember! **For safety reasons tire air pressure should be checked cold at least once a month**, and ALWAYS before making a long trip. Don't forget to check the spare tire too!

Speed is also a factor in tire wear as it makes tires run hotter - the hotter they run the faster they wear. In addition, there is an increase in fuel consumption. Never exceed the maximum speed rating of any tire.

This information is given to assist with the proper air pressure maintenance in tires. Always consult the tire manufacturer or its authorized dealer for more detailed information.

Check here for GoodYear Tire Inflation Chart:

http://www.goodyear.com/rv/pdf/rv_inflation.pdf

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