RV TIRE SAFETY

The following article is from the December 2004 publication of the Good Sam Club HIGHWAYS magazine. In the RV industry, it is usually assumed that everyone has weighed their recreational vehicle. As stated in the article, very few owners or users get this done.

All RV's should be weighed with full loads of fuel, water, and supplies. There needs to be a base line weight, as well as an update if loading changes.

If there were a tire, axle, suspension, etc, failure, chances are the manufacturer of the RV or its dealer are going to say that the RV was overloaded, thus not subject to warranty repairs. If you have a current weight certificate, this makes the overweight statement a little harder to claim.

Weights may be obtained from a number of locations as stated in the article. A readily accessible location is a truck stop with scales. This usually costs from $8.00 to $15.00. Worth every penny if there is a problem! The newer scales can weigh all axles at the same time and give you independent axle weights and the overall gross vehicle weight.

This also applies to pick-ups or other tow vehicles with trailers. You do not want to overload the tow vehicles rear axle weight rating.

Tread Safely

Tire failure can ruin a good vacation and even cost you your life, so the more you know the safer you are.

By Linda Lee Walden and Lynn Laymon

Hurtling along at highway speed is no time to experience RV tire failure. Whether you're pulling a pop-up camper or driving a diesel motorhome, you rely on your tires to assure a safe and trouble-free journey. And yet, according to the RV Safety Education Foundation (RVSEF), more than half of RVing highway accidents and breakdowns are a result of tire failure.

What's the cause of this alarming statistic? Are tires the problem or are we RVers our own worst enemies?

According to Walter Cannon of RVSEF, it's the latter.

"Your RV tires should be safe and reliable if they are the right size and type for your RV and you use and maintain them as intended," he says. "At one time there were questions about whether some RVs were 'undertired' for their weight and carrying capacity, but in the last several years manufacturers have ensured that the tires they put on RVs are capable of carrying the maximum allowable load for the vehicle."

Since the tires that manufacturers put on RVs are apparently not the problem, what is? RVSEF recently released figures stating that 61% of the 27,000 RVs that have been weighed through their mobile program "exceeded at least one of the following weight ratings: GVWR, GCWR, axle or tire." This figure includes motorhomes, travel trailers, fifth-wheels, pickups and medium-duty trucks. Equally alarming, more than 40% of tires were found to be overloaded.

"The air in the tire carries the load, not the tire," says Kris Fettig, RV account executive for Goodyear. Overloading results from having improper tire pressure for a given load — either by exceeding the maximum load rating or from under inflation.

"Under inflation causes increased friction with the road surface, which produces excess heat," explains Ron Gilbert of Toyo Tires. "Just 10% under the recommended air pressure dramatically reduces the life of the tire and can actually lead to tread separation and disintegration of the sidewall."

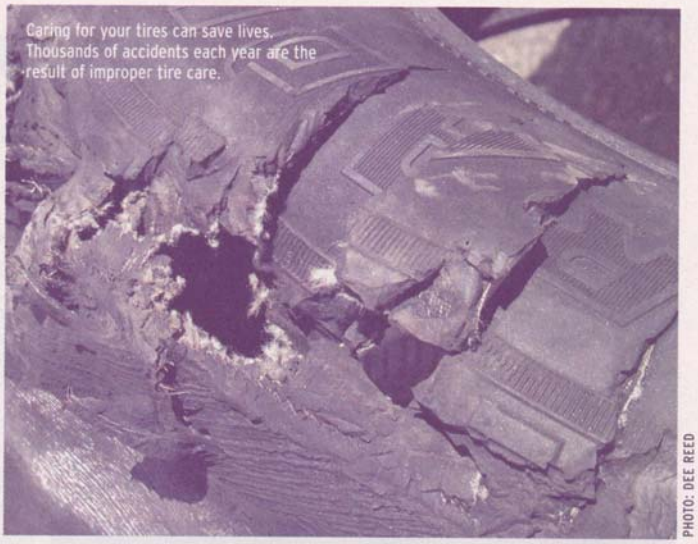
The Tire and Rim Association (TRA) states that any tire found to be 20% under recommended inflation pressure is considered flat and should be taken out of service until inspected by a qualified tire service specialist.

Although failure to maintain proper inflation pressure is the primary cause for RV tire failure, age is also a significant factor.

So how do you know if your RV tires are properly inflated? Major tire manufacturers Goodyear, Michelin, Toyo, as well as RVSEF, all strongly support the same message: Get it weighed!

But just pulling onto a roadside truck scale won't suffice. Correct tire inflation pressure is determined by the model and size of tire and the load (weight) on each wheel position (one end of an axle) and is limited by the maximum load rating of the tire.

The first step to ensuring proper tire inflation is having the RV weighed by wheel position; that is, the left and right front tires and left and right positions (either single or dual) on the rear axle(s) must be weighed individually. This tells you the load on each wheel position. Spartan chassis engineers recommend that the difference in loading between the ends of an axle (weight bias) be no more than 5% of the axle rating. To get an accurate reading of actual weight, it is essential that the RV be loaded for travel.



Caring for your tires can save lives. Thousands of accidents each year are the result of improper tire care.

PHOTO: DEE REED

RVSEF provides mobile weighing services for a reasonable fee at 50 to 60 RV rallies a year, including many Samborees. Public-access scales can be found at most large truck stops, as well as some moving company lots, gravel pits and recycling companies. In addition, states sometimes leave commercial truck scales open on weekends. Another possibility is to contact your state's Department of Transportation's Commercial Enforcement Division to determine when their mobile scales will be operating in your vicinity.

The second step is to locate your RV's load ratings. Gross vehicle weight rating (GVWR), which indicates the maximum permissible weight of the RV, is equal to the sum of the unloaded vehicle weight (UVW) — as it comes from the factory with full fuel — and the net carrying capacity (NCC) — the maximum weight for everything else you load onto and into the RV, including driver and passengers. The gross axle weight rating (GAWR) is the maximum permissible loaded weight a specific axle is designed to carry. These ratings take into account several factors, among them vehicle frame, wheels, axle, springs and tires.

Specific load ratings for your RV can be found on the wall or posted beside the driver's seat of motorhomes and towing vehicles or outside near the left front corner of towables. If your weight test results exceed the GVWR, it means your entire RV is overloaded — and therefore one or more of your tires are overloaded. The only safe solution is to reduce overall weight by removing contents.

If the GVWR is OK but the limit of one axle (GAWR) is exceeded, it may be possible to redistribute items to correct the axle overload.

Even if the results of your weight test don't exceed the posted GAWR or GVWR, it is still possible that individual tires are overloaded if the weight is distributed unevenly side

Weighing In

The 2005 schedule for RVSEF mobile weighing at RV rallies is available on their website (www.rvsafety.org).

Also, The Good Sam VIP RV Safety Rally, an RV safety program designed for you and your co-pilot, is set for May 9-13 at the Florida State Fairgrounds in Tampa. The program moves to a different part of the United States each year.

The RV Safety Rally, sponsored by Good Sam VIP Insurance, the Good Sam Club and General Motors, is aimed at education for all RVers. It consists of classroom instruction about RV safety, a free weigh-in of participants' rigs and classroom discussion of weight distribution and tire pressure. Also included is an RV Hands On Driving Course and an Auto Hands On Driving Course in which you'll practice off-road recovery, skids and turns in vehicles.

There are also safety-related seminars on topics such as hitching and unhitching a fifth-wheel, propane safety, proper use of a fire extinguisher, fatal vision (the effects of drinking on driving) and what to look for in RV insurance.

Part of the program is taught by instructors from the RVSEF and participants will be given an opportunity to register for additional private RV hands-on driving time. For more details, see page 10.

to side. Step three of the weighing process is to locate your tires' size and minimum cold inflation pressure for the maximum load rating, which are molded into the tires' sidewalls. "Cold" means that the RV has been driven less than one mile before checking inflation pressure.

Assuming the wheel position weights are equal to or less than the maximum load rating on any tire, the next step is to check the tire manufacturer's load/inflation tables to determine the correct inflation pressure for your specific tire and current load. RVSEF supplies the correct chart(s) with their weighing service; otherwise you can contact the tire manufacturer.

On the appropriate chart locate your wheel/tire combination and your RV's actual weighed load for each wheel position, or the next highest entry. The corresponding psi figure is the correct tire inflation pressure for that type of tire at that load range only. It is important that all tires on a specific axle be inflated to the same pressure, so if the loads on individual wheel positions require different pressures, the higher inflation pressure should be used for all.

Don't be tempted to automatically inflate your tires to their maximum pressure regardless of actual load.

"Overinflated tires cause a rough ride and lead to irregular and premature wear," says Toyo's Gilbert. "Also, overinflated radial tires do not hold the road as well."

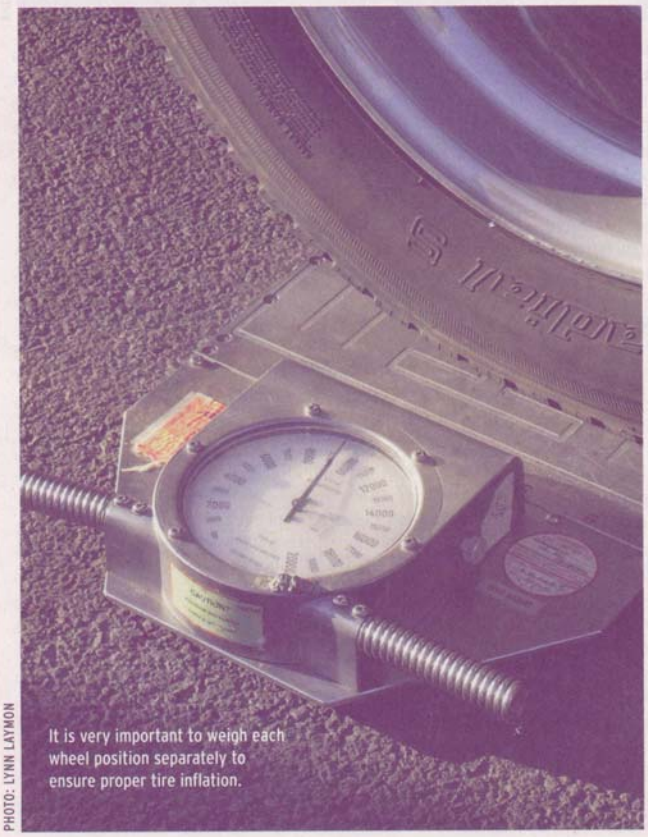
To maintain the proper safe inflation pressure, check each tire with a quality truck tire gauge when you take the RV out of storage and before a trip. Each travel morning recheck the pressure and visually inspect each tire for cuts and cracking.

Although failure to maintain proper inflation pressure is the primary cause for RV tire failure, age is also a significant factor. RVers are unlikely to wear out a properly inflated and maintained set of tires, according to Cannon at RVSEF.

"Truckers run several hundred thousand miles on similar tires. The limiting factor is tire age," says Cannon.

Depending on exposure to sunlight and ozone, the rubber in tires can be expected to last between five and seven years from the time the tire is put into service.

The bottom line on RV tires is that they are safe if used properly. Have your RV weighed when you load it, and again if the load changes significantly, and maintain the proper inflation pressure. Take care of your tires and they will take care of you. •



It is very important to weigh each wheel position separately to ensure proper tire inflation.

PHOTO: LYNN LAYMON

Go Straight to the Source

Tire load/inflation tables, as well as weighing instructions and additional tire safety information, can be obtained by contacting these companies.

Goodyear
www.goodyear.com/RV
330-796-0026

Michelin
www.michelinrvtires.com
800-847-3435
Instructional videos also available

RV Safety Education Foundation
www.rvsafety.org
321-453-7673

Toyo
www.toyotire.com
800-678-3250, Ext. 2265