

Axle Question

Let me start with tires, then I'll get to the axle issues. The proper size tire ST225/75R15. I run them on a 67 Globe Trotter and Trade Wind, both with new axles. The tire pressure can be reduced below maximum. A 64 Globe Trotter, in Denver, weighs 3500 pounds fully loaded. That is 1750 pounds per tire. Running 45 PSI will give a 15% margin to allow for unequal weight distribution. Note, maximum pressure in a C rated tire is 50 PSI, and 65 in a D.

PSI	30	35	40	45	50	55	60	65
Load, #	1600	1760	1880	2020	2150 (C)	2270	2380	2540 (D)

Monitor both the tire pressure and temperature. Check the temperature of the tires with an infrared gauge (inexpensive at the Shack). Mine run between 102 and 112 degrees F on the shady side and hotter on the sunny side. A change from typical will tell you something is wrong. Check inflation pressure when tires are cold.

Now about axles, over time the rubber in the axle losses its flexibility and becomes ridged. You cannot fix it by heating the axle. Heating will damage the rubber when new, it won't fix it when old. The inner square shaft shown in the picture, of a cut off axle, rotates with the swing arm by compressing the four rubber rods. The rubber rods in an old axle cannot be compressed. By the way, axle rating in pounds is increased at the factory by increasing the length of the rods, which applies more force against compressing.



How do you know if your axle needs to be replaced? Here are the common symptoms:

- Swing arm is horizontal and won't drop down more than an inch at the spindle if trailer is jacked up.
- Rivets pop loose inside, or seams open in and around cabinets.
- Hangers and clothes bounce off rods.
- Age of trailer axle:
 - Over 25 years old, think about a new axle.
 - Over 30 years old, can you justify not replacing the axle?
 - Over 40 years old, replace the axle.

One last point, small trailers (Caravels, Bambi, and others) in the early sixties had five lug wheels and a smaller wheel spindle. They have broken as seen here. Don't take the risk. Replace the axle if it has a five lug wheel.

Guidelines above are based on my experience and that of Luke Bernander, #11965 (970 222-4065). Luke has replaced many axles in Colorado, and knows the details of ordering.

When ordering an axle, weigh your trailer. For dry weight, add 500 pounds to a short trailer to get loaded weight, or



1000 pounds to a medium length. Increase the loaded weight by 15% to get maximum axle rating. If you over-rate an axle too much, the suspension will be too stiff. Modern axles have many options including: swing arm down angle, mounting to raise the trailer, shock absorber brackets, self adjusting brakes, and others. Be sure you understand the options, and most importantly, the critical dimensions.

