Boatmanship

Pump Up Your Hubs

Air tight protection for your trailer bearings.

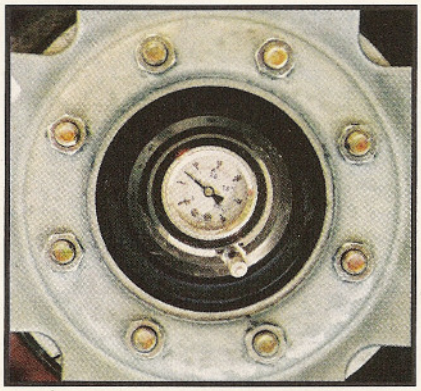
By ARIEL CABRERA

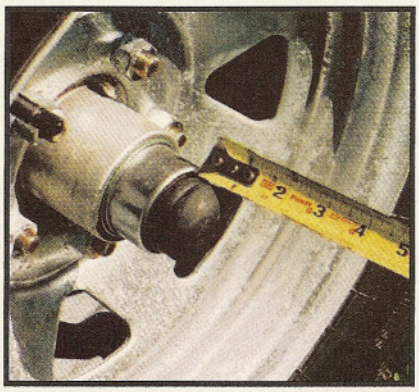
Trailering a boat far from home in search of a great day on the water is SOP for many of us. But if your trailer bearings fail, your trip becomes misery. And in trailers used in salt water, bearing failure is all too common.

Keeping your hubs filled with fresh grease can help avoid problems. But when it comes time to replace your bearings, you may want to consider a fail-safe system that actually pressurizes the inside of your hub, assuring that no water ever gets close to any of the moving parts.

One company that makes pressurizing kits is Air-Tight; www.airtighthubs.com. For about $25 a hub, you can make sure any problems caused by saltwater intrusion are in your past. Of course, there are other systems that also work well, including the venerable Bearing Buddy, a pressure-filled grease cap that you simply tap into place in your old hub—it's $18 to $28; www.bearingbuddy.com. Or, you might check out Turbo-Lube oil-filled hubs, another system aimed at sealing out the saltwater environment. Prices vary from $40 to $45; www.tiedown.com.

There are currently two models made by Air-Tight. Both allow quick visual inspection and warn you of potential hub problems. They are easy to install but you'll need to be patient, because a bonding agent used in the installation needs to dry overnight. An airtight seal and bushing needs to be used on your trailer's axle in order to allow it to be pressurized. Willy Ventura from All American Trailer in Fort Lauderdale demonstrated to me the step-by-step process required to install the sport model and made it appear simple. Follow these steps diligently to your own successful do-it-yourself Air-Tight installation:





Above, tape shows reference for proper inflation of Air-Tight sport model. At top, commercial model with built-in air pressure gauge.

- Disassemble the wheel and use a grease gun to make sure grease passages are not obstructed.
- Clean the axle with degreaser, lacquer thinner, and sand surface with emery cloth respectively. Remove stainless bushing from axle, if applicable. A clean axle will bond well.
- Shake the bonding agent adhesive and apply 360 degrees on the axle and to the inside of bushing.
- Install the bushing by hand or tap it in by using an old inner bearing and steel pipe.
- Get the hub ready and clean. New bearings and races are desirable. Now apply bonding agent to the inside surface of the hub and on the "super" seal's outside surface area 360 degrees. If possible, use a seal driver to ensure the seal goes into the hub evenly. Seal needs to be flush with hub so that it is true.
- Pump grease through the spindle in order to lubricate axle and bushing.
- Install hub on axle, outer bearing, washer and nut, and bend cotter pin into place.
- Apply bonding agent to the hub and press in the sports cap using a piece of wood or plastic block like in the previous steps.
- Put grease on the diaphragm's grommet and place into cap's end.
- Allow 24 hours for bonding agent to dry.
- Using a bicycle or hand pump and greased sports needle, inflate nipple to ¾ inch out past the cap.

Once the adhesive cures, you can use a manual sports pump to inflate the new airtight hub. Avoid using compressors or automatic air pumps; they are not recommended because they may overinflate the diaphragm, causing damage to the seal and allowing water incursion. You only want 5 to 10 psi above standard atmospheric pressure.

The commercial model offers precise air pressure measurements in psi. Additionally, a solid cap has to be removed by unscrewing it when regreasing is necessary. The sport model's nipple or diaphragm also has to be removed for regreasing and visual inspection. With the sport model, you'll need ¾ inch of the nipple (diaphragm) to be inflated for proper protection. The sports needle is also used to expel/release air from the diaphragm before regreasing

Universal kits for both commercial and sport models are available, eliminating the need to measure the spindle size on the trailer. If you know your trailer specifications, you can purchase the correct kit. A tool list and more tips on installation can be found at www.airtighthubs.com.

Don't forget to monitor the air cap frequently. It will tell you what's going on inside and help you prevent time-consuming and unnecessary repairs. An airtight hub will keep your bearings trouble-free, so long as you remember to lube regularly and re-inflate now and then.