

Upgrading the trailer

by Paul Esterle
Contributing Writer

I recently had a chance to inspect Ternabout's trailer (Ternabout is our small trailer boat). What I saw was worse than I thought. I hadn't done any maintenance on the trailer, except for new tires and packing the wheel bearings, for over ten years, and it showed.

The springs were rusty and sagging, the insulation on the wiring was cracked, the bunks needed help, and the coupler and chains were rusty and suspect as far as strength went. The aluminum frame was in good shape and needed no welding; that was good news. With the boat off the trailer, it was an ideal time to upgrade the trailer.

Spring Replacement

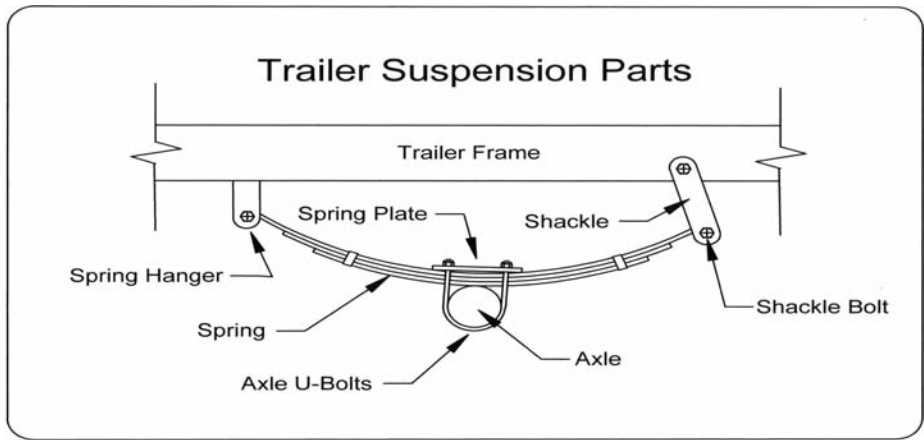
This was the big one. The original

springs were sagging and tired. Looking at the original trailer documents, I don't think they were ever of a high enough load rating for the boat loaded and ready to sail. In addition, the shackles and bushings were also questionable.

Luckily, I have a boating store nearby that has an impressive inventory of boat trailer parts and accessories. I was to make frequent visits there during the trailer upgrade.

My springs had an eye at each end; other trailers have different spring configurations. With the eye-to-eye spring measurement, I was able to find an exact size replacement with a higher load rating than the original spring. I also purchased new spring pads, axle U-bolts, shackle and shackle bolt kits, as well as new shackle bushings.

After I jacked up the trailer and sup-



ported the frame, the fun commenced. At some point in her life, Ternabout and her trailer had been in salt water. That and the years of age ensured that all the nuts and bolts were corroded beyond easy removal. I finally resorted to cutting the bolts and nuts off with a fiberglass-reinforced cut off disc in my Dremel (don't use the un-reinforced discs, they shatter!).

The next problem was bolting the shackles and springs together. The shackles are heavy steel plates that connect the spring eye to the frame, one on either side. A large bolt goes through the shackles and the bushing in the spring eye. The problem was that the top portion of the shackle bolt had ridges that were meant to force their way into the shackle hole, keeping the bolt from rotating.

I'm sure a trailer manufacturer could put these bolts in place quickly with an impact wrench, but I didn't have one. I ended up buying a heavy-duty socket and an eighteen-inch breaker bar. That, in combination with a length of pipe over the breaker bar handle, finally gave me enough leverage to seat the bolts.

The rest of the spring installation went quickly. The new spring pads went under the spring and over the axles, and the new U-bolts held everything in place.

Wiring and Lights

With the springs taken care of, my next project was replacing the wiring. While removing the old wiring, I decided to go the whole route and replace the lights as well. My tried and true boat trailer parts store had a wiring kit available for a trailer my size. It contained all the necessary wiring, as well as the trailer plug and very good directions.

One of the problems with the old wiring was that it was exposed to the weather, which contributed to its deterioration. It was also prone to inadvertently snagging the exposed wiring. To avoid those problems and make a neater installation, I placed all the wiring in split black plastic wire conduits. These are available

in various sizes from your marine store. I held the conduit in place with nylon wire clips screwed into the trailer frame.

I followed the directions religiously and, to my amazement, the lights worked correctly the first time I tried them.

Trailer Coupling & Safety Chains

The old trailer coupler was rusted and hard to work. The chains were probably as strong as new, although rusty. Since I had to unbolt the chains to get the coupler off, I decided to replace the whole mess.

Ternabout's trailer was manufactured by Trailex, an aluminum boat trailer manufacturer. Being aluminum, the trailer tongue, where the coupler mounted, tended to collapse if the coupler was over tightened. To combat this, I installed a tight-fitting block of oak inside the trailer tongue and re-drilled the coupler mounting holes.

Trailer Jack

The front end of the trailer was supported by an ancient-looking trailer jack. It still worked, but only under protest. I had liberally greased it to get it to work at all, and I got grease on myself almost every time I used the jack.

To my amazement, my trailer parts store carried the exact same model, still in production even after all these years. I didn't want to argue with success, so I purchased one and was easily able to do a direct replacement. Now it is almost a joy to crank up and down from off the trailer.

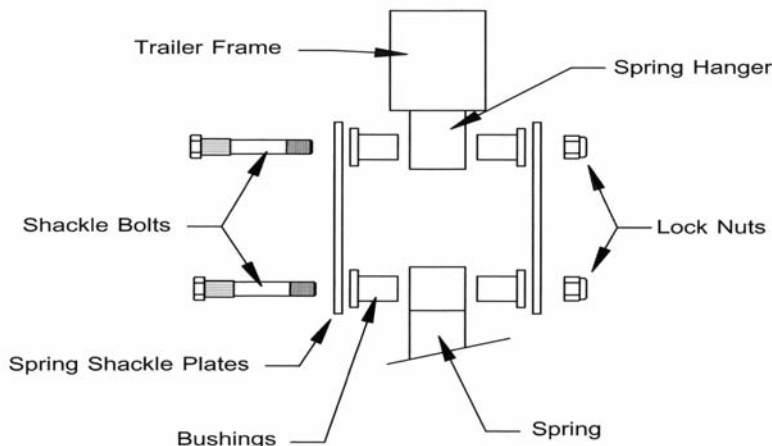
However, even the new jack doesn't get the tongue at a high enough angle to allow the cockpit to drain. For that to happen, I needed to place the trailer jack wheel on a couple of cinder blocks or on a trailer stand.

Keel Board

Ternabout has a dagger board, raised and lowered by means of a winch on the aft face of the cabin. After loading her on

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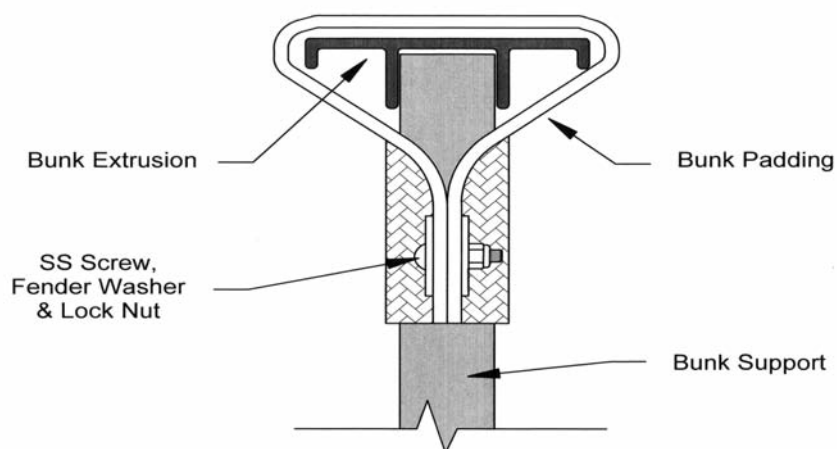


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the trailer, I always lower the dagger board down so it is resting on the trailer, keeping any road jolts from stressing the dagger-board mechanism.

Normally the lead bulb on the bottom of the daggerboard rested on a piece of plywood bolted to the center of the trailer. By the time Ternabout had made it to the Chesapeake, that plywood had rotted and disappeared. The only trace of it was a double row of rusted carriage bolts that used to hold it in place.

The bolts had to be cut off with my trusty Dremel and then driven out with a hammer and drift pin. I could have replaced the plywood with more plywood, or even a common 2x6. Instead, I found a piece of composite deck material the right size. This material is a mixture of sawdust and recycled plastic and is supposed to hold up much longer than a straight wood product. It works as easily as wood and is only slightly more expensive than real wood. We'll see how it holds up.

Winch Replacement

The winch on Ternabout's trailer was

original. I had replaced the cable once, but the winch was getting rusty to the point of being dangerous, so it was time to replace it also.

Luckily, the sizes and mounting dimensions of trailer winches have changed very little over the years. I was able to easily find a bolt on replacement that fit perfectly. Instead of the usual galvanized steel cable, I decided to use some high-tech, low-stretch line for the winch cable.

Fenders

I wasn't sure if fenders were a legal requirement for a boat trailer in Delaware. However, I knew I didn't like the dirt kicked up by the tires hitting the freshly painted hull, so fenders were on the upgrade list. The original fenders had removed themselves when the steel fender brackets rusted away, more evidence of salt-water immersion.

Not wanting to repeat that mistake, I found new plastic fenders that fit the width of the wide (10x20.5) tires. I made new brackets from heavy aluminum bar stock I purchased at the local home improvement store. While they aren't strong enough to stand on, they do protect the hull from er-

rant rocks, spray and mud.

Trailer Bunks and Padding

The last task to accomplish on the trailer rebuild was to fix the trailer bunks. These curved aluminum extrusions conform to Ternabout's hull, two inner and two outer ones. These were originally covered with a rubber extrusion that slides over the aluminum bunk.

A quick call to Trailex told me that those rubber pieces were no longer available. I would have to come up with some other way of padding the bunks.

I considered laminating several thinner pieces of wood together and then covering that with trailer bunk padding. I wasn't able to come up with a reasonably simple way of mounting the new wooden bunks in place of the old aluminum ones, so dis-

carded that idea.

I finally decided to simply wrap the pad around the aluminum extrusion and bolt it together. I draped the padding over the bunk extrusion and held it together underneath with spring clamps. I used an awl to make a hole through both sides of the carpet, and then bolted it together with stainless-steel bolts and big fender washers.

Tightening the nuts and bolts nicely tensioned the padding and kept any fasteners away from potential contact with the hull. In my case, standard trailer bunk padding was just the right size to go around the aluminum bunks. I would have gone to outdoor carpeting had I needed wider strips of padding.

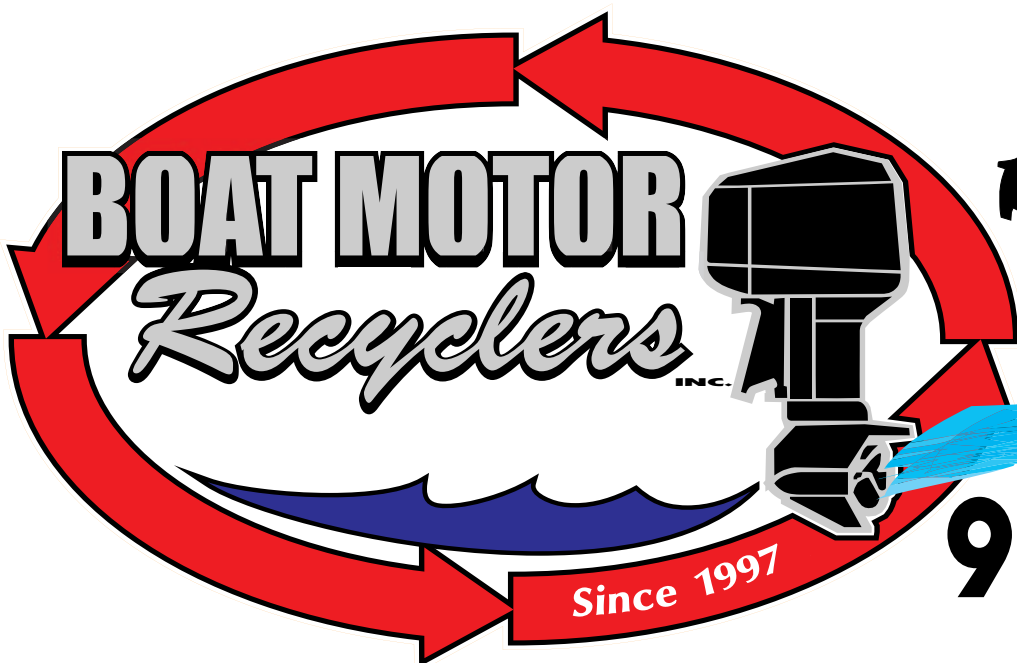
All told, the cost of upgrading Ternabout's trailer was about \$250, not bad at all compared to the price of a new one.



The new fender, fender mount, spring, and spring shackle.



The new composite keel board for Paul's old boat trailer.



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