

Hardware Refurbishment

by Joel Justin

I like to reuse as much hardware (nuts, bolts, screws, washers, etc.) as possible. Unless it's damaged, I reuse everything except lock washers and nyloc nuts.



Figure 1: Bolts, nuts and washers before cleaning

To clean the hardware, I use a 4-step process. First, I put them in an ultrasonic cleaner (<https://www.harborfreight.com/25-liter-ultrasonic-cleaner-63256.html>) with a 50/50 mix of Simple Green and water. I heat it up and run for about 30 minutes (four 8-minute cycles). This gets the dirt and grime off.



Figure 2: Parts going in ultrasonic cleaner



Figure 3: Parts after ultrasonic cleaning

Once I'm happy with how they look, I dry them and run the bolts and nuts thru a thread restorer (<https://www.amazon.com/Thread-Chaser-Repair-Rethreading-Restorer/dp/B0BH8QSHTF/>). This not only cleans and crud in the threads, but also "repairs" and lightly damaged threads.



Figure 4: Thread restorer kit

Next I run them thru a tumbler (<https://www.harborfreight.com/5-lb-metal-vibrator-tumbler-67617.html>) with coarse media (<https://www.harborfreight.com/5-lb-rust-cutting-resin-abrasive-tumbler-media-63672.html>). This gets any rust and corrosion off and gives them a dull finish.



Figure 5: Harbor Freight tumblers and both types of media – resin and corn

Finally, I run them thru a second tumbler with fine corn media

(<https://www.amazon.com/gp/product/B001GX6KTK/>) to polish them. I usually do about 8 hours each, although I've been known to run them in the final step for 24 hours.



Figure 6: Bolts, nuts and washers after both tumbler stages