

Bearing Cleaning Process

By RCJohnny

This is an outline/rundown on the bearing cleaning processes I have used in order to make the bearings run as freely as possible for my model roller coasters. The most important parts to having smooth running bearings are to choose the right bearings, remove all grease/lubricant from the bearings, and clean off all remaining degreasing product from the bearings. This will ensure the bearings are completely free of all materials and spin “dry” freely as any unwanted friction from lubricants slows down the bearings as well as decreases the likelihood of contaminants (dust) being collected in the bearings.

Choosing the Right Bearings:

Choose bearings that are open or where the “shields” can be removed. This will ensure the inside of the bearings can be fully accessed and the grease can be removed easily and once cleaned, have the least amount of resistance between the middle and outside of the bearing. I have chosen to use “rubber shielded bearings” as the rubber shields can be easily removed with a utility knife.

I also have had friends successfully use “metal shielded bearings” for their projects, but there are some things to keep in mind with these bearings which are possible disadvantages. The shields are not removable, which makes the removal of grease tougher and the shields pose an increase in friction as compared to the open or removable-shielded bearings. One of the advantages to these bearings though is the shields protect the insides of the bearings from debris much better than any open bearing.

Here are some pictures of the bearings mentioned above:



Open Bearing



Rubber-Shielded Bearing



Metal-Shielded Bearing

Removing the Grease/Lubricant from the Bearings

Once all shields have been removed, soak the bearings in a degreaser solution. I generally soak a handful in a glass jar and gently shake the jar every 15 minutes or so ensuring the grease is being removed from the bearings. You will start to notice the bearing grease turn a white color and come off in pieces from the bearings and make the degreaser solution cloudy. The degreaser solution can then be drained and the process repeated until the degreaser solution looks to have removed all of the grease and no longer becomes cloudy.

As far as degreasing solutions goes, I have tried various citrus degreasers which have all mostly worked after a couple times of soaking, shaking, and replacing the degreaser. That being said, the best

solution I have used thus far is Naptha. This is a solvent which can be used to remove paint and well as for other more-abrasive procedures. Naptha is a harsh chemical and should be used in a ventilated room with the proper protective equipment (gloves, etc.). From my experience the grease came completely off after one or two soakings in the Naptha solution.

Cleaning off all Remaining Degreasing Product from the Bearings

This is the final step which will remove any film or buildup from the degreaser solution and ensure the bearings are completely dry. In the past I have taken a spoonful of the bearings from the degreaser solution and rinsed them in warm water and then used a small bit of compressed air to spin the bearings dry. This system worked well, but if the water is not removed quickly, it could start to rust to the bearings. A separate solution which has worked just as well and poses less threat to the bearings is to soak them in acetone. Acetone is an alcohol solution which easily evaporated from the bearing's surface leaving it quite clean. I then make sure to spin all bearings to ensure nothing is binding and to make sure the bearings have been fully cleaned. If the bearing can spin freely for 5-10 seconds on the end of a pencil, they should be good to go. I would then suggest you put all cleaned and dry bearings in a Ziploc bag and save a stash for later when the bearings start to jam up.

Other Notes:

If you would like to watch a video I made a couple years ago on how to clean the bearings with the degreaser solution, water, and compressed air here is the link:

<https://www.youtube.com/watch?v=JpGfpEPmnZI>

If the space you are working in is somewhat dusty the bearings will slow down much faster and need to be replaced or cleaned, so make sure your track is dusted off and the cars and bearings are stored in a dry and clean environment. If you notice some bearings roll better than others place those on the top as the "road wheels" as these are the bearings that take most of the weight of car. And visa versa, if some don't roll as well and unless your train is inverted, place those wheels as the "up-stop wheels" which generally do not touch the track as much.

The process I use to clean the bearings is mostly done with household items or items that can easily be easily found in stores. If budget is not an issue or one is easily available, an ultra-sonic cleaner can also be used to remove the degreaser. This will cut down the time It takes to clean the bearings.