

Alternative to Bandsaw Bearing Guide Replacement

by
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My wife often tells me that I am miserly when it comes to saving things. For instance instead of throwing out an old worn bed sheet, I will cut it up into rags for use in the shop. I venture to say that most woodworkers fall into this category. However I don't call it being miserly but rather being frugal and not wasteful, hence all the small pieces of scrap we keep around our shops. I know some of you can relate to being frugal and with that in mind I would like to discuss the blade guides on your bandsaw.

Two types of guides are used on bandsaws to keep the blade aligned and cutting properly. Some bandsaws use "guide blocks" while others will use roller bearing guides. Most guide blocks are a phenolic laminate with graphite embedded into the laminate. There are also guide blocks made of ceramic, aluminum, bronze, and other materials.

On higher end bandsaws, roller guide assemblies are often used instead of guide blocks. Which is better is open to a lot of discussion. Each has its pros and cons including cost factors, but the final choice as to whether guide blocks or roller assemblies should be used on a bandsaw is the personal choice of the woodworker.

Regardless of which type of assembly you use, each bandsaw comes with an upper assembly and lower assembly.



Upper Guide Block Assembly



Upper Roller Guide Assembly

Their configurations vary between manufacturers and are also different between the upper and lower assemblies.

As mentioned the purpose of these guides is to keep you blade in proper alignment to provide the best cut. Each time a blade breaks or we change one, we need to readjust the guides. Typically it is easier to adjust the upper guides rather than the lower ones.

This article will not discuss how to adjust either the guide block or roller assemblies. There are plenty of videos and discussions on the Internet and your bandsaw manual also discusses the process. This article discusses the roller bearings found on roller assemblies.

Each roller assembly has three bearings. When adjusting the upper bearings it is easy to see if they rotate or not during the adjustment process. The lower bearings are harder to see and usually are harder to get at. Therefore they are at “greater risk” of failing than the upper bearing. In a nutshell it is easier to turn the upper bearings and see them rotate. Not so with the lower bearings. Even with good lighting it is difficult to see if the lower bearings are turning and we often think they are, when in fact they might not be.

If any of the upper bearings are not turning, it is fairly easy to remove them. However the lower bearings are not as easily removed and often times you will need to remove the entire lower assembly. And that is probably where you will be having problems.

Here is what occurs. When using your bandsaw two types of sawdust are created. When sawing, the majority of sawdust created comes from the gullets between the blade’s teeth. Most of this dust gets sucked away in the lower wheel compartment of your bandsaw by the dust collector but some still falls on the lower roller assembly and other parts.

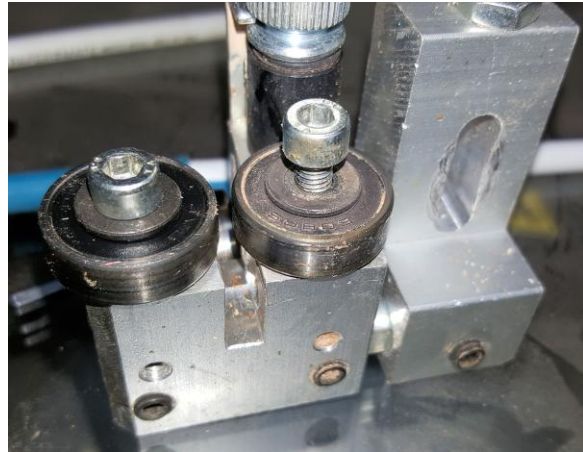
The second type of dust is much finer than the gullet dust. This dust is caused by the blade’s teeth scraping the sides of the cut. A lot of this type of dust usually does not get carried down into the lower wheel compartment of your bandsaw but settles on the lower guide assemblies. Some manufactures have created a secondary dust port that is close to the lower roller assembly in order to carry off a lot of that “extra fine” dust.

Assuming that you don’t have this secondary dust port (and even if you do), the extra fine dust settles on the lower roller assembly and with time the dust seeps into the bearings, even if they are “sealed.” All “sealed” means is that you don’t have to grease them like you did in olden times.

As I said earlier, I am frugal. I cringe at the thought of paying \$30+ for a set of new bearings. You can get them cheaper but remember, you get what you pay for. So is there an alternative?

Since the problem most likely is a buildup of dust inside the bearing, you can easily determine if cleaning is the best option and does not require any real expense but just a little time. So let us begin the cleaning process.

1. This is a typical lower roller assembly found on bandsaws. The bearing on the left has been cleaned but the one on the right is still dirty.



Remove the dirty bearing from the assembly being careful to note the arrangement of washers and the bolt.

2. Once the bearing is removed there may be an insert. Remove the insert. The insert is typically made of plastic and can be seen in the above photo and the one to the right.



The bearings on a bandsaw are usually “sealed” or “shielded.” If the bearings are sealed, you will need to buy new ones. If shielded, the ball bearings within the bearing are usually covered by metal or plastic plates that can be removed.

See note below on bearings for more information.

3. Using the corner of a razorblade or the tip of an Exacto knife gently insert the tip between the outside ring of the bearing and the cover plate (shield). Gently lift the cover plates off both sides of the bearing.



4. When the cover plates are removed you will probably observe a lot of fine dust. This dust is responsible for causing the bearing to “seize” up.



5. Using compressed air, blow out as much of the dust as possible. Do this several times on each side of the bearing.

At this point it may be possible to turn the inner ring of the bearing. If the ring turns with hesitation, does not turn smoothly, or does not turn, further cleaning is needed.



6. If further cleaning is required, spray acetone on and through the ball bearings. Do this from both sides of the bearing. The acetone will dissolve any grease in the bearing and help flush out any remaining dust particles.

Repeat this process until the center ring turns freely and smoothly.



7. Once the bearing is clean, clean you will need to lubricate it. While grease can be used my recommendation is to use WD-40 or other non-silicon lubricant that can be sprayed on.

“Wash” the bearing well with the lubricant. Do this from both sides to make sure that the lubricant covers all the ball bearings, their retaining rings, and the inner and out bearing rings.



8. Once the bearing is well clean using compressed air, acetone and WD-40, it is time to lubricate the ball bearings.

In the past, grease was often used to pack and lubricate bearings. The problem is that too much grease will churn the grease, pushing it out of the way, resulting in energy loss and rising temperatures.

New spray lubricants that have far better properties for use on bearings have been developed. One such lubricant that can be found in automotive stores and Walmart is WD-40, White Lithium Grease.

See note below on lubricants.

9. Clean the cover plates with acetone, followed by the lubricant.

Replace the cover plates.

Thoroughly clean the roller assembly and reinstall the bearing.

Once all the bearings have been cleaned and the roller assembly put back together, reinstall the roller assembly onto the bandsaw and make any necessary adjustments.



Now get back to woodworking.

Note: Sealed Bearing

Your bearing may be sealed or “shielded” (cover plates). Typically you will not know unless you try to remove the cover plates as described above. However if you want to buy new bearings that are sealed, the manufacture will use either the AFBMA or SKF coding system. On small bearings the code is often indicated on the packaging and may also appear in very fine print on the bearing. If the bearing number uses:

Code System	Look for:
AFBMA	EE
SKF	2RSI

This is the only way to identify whether a bearing is sealed.

Note: Lubricants

There are many quality lubricants on the market. While silicone grease lubricants are best for lubricating today’s bearings, you do not want to use any silicone based products in a woodshop. If silicone gets on any wood, you will not be able to apply finish over it. Thus the best approach is to keep all silicone out of the woodshop.

Once you have lubricated a bearing, wipe off any excess lubricant with a paper towel.

Once you have reinstalled either the top or bottom bearing assembly, before making any adjustments, wash your hands and tools with soap and water to remove any lubricant. After the washing, go ahead and make all necessary adjustments to your bandsaw.