



# *Bandsaw Tips, Tricks, and Mods*

by Kurt Hertzog

Whether you buy a bandsaw new or used, you probably have a good idea of its strengths and weaknesses, and possibly some of the aftermarket solutions. There are companies whose entire focus is repairing, replacing, and hot-modding bandsaws. We'll look at a few of the more useful upgrades and repairs that can enhance your bandsaw's functionality.

Throughout the article I refer to some specific name brands. These are offered as examples because they are products I have on hand. The marketplace is crowded, so shop around, and make sure that the solution you choose fits your specific saw model.

## ***Blade guides***

Your saw will have either roller bearings or guide blocks to support the blade in the cut. My article in the May 2019 issue of *Woodturning FUNDamentals* addressed adjusting roller bearings.

Metal guide blocks, which many manufacturers install as standard equipment, generate friction and heat that can quickly degrade a blade and can also cause green wood to swell and pinch the blade.

As a solution, a number of companies offer replacement guides made of ceramics or high-tech composites. A commonly available example is Cool Blocks. Most of these options fit into your machine's existing guide holders and generate less friction than your saw's original guides.

A blade stabilizer will improve blade tracking and the quality of your cut, particularly for narrow blades cutting tight turns. The aftermarket stabilizers slide onto the existing saw mechanics. They provide a back-up roller with a guiding slot cut into the roller. I've only seen them used on 14" saws with 1/4" (6mm) or smaller blades.



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*Non-metallic guide blocks, guide fitting insertable roller bearings (both left), or blade stabilizer (right) can improve the quality of your cuts and the lifespan of your bandsaw blades.*

### Tires

Rubber tires are standard on all but the most upscale models. They generally function well but they do have a limited lifespan. They can get polished or chewed up, depending on your use and blade tracking alignment.

Even with proper alignment, rubber tires age, lose their gripping ability, or crack. As tires lose their gripping capability, our tendency is to increase the tension on the blade to compensate. This works temporarily, but it doesn't do the tracking or blade life much good. A better solution is to periodically check the tires for aging or wear and replace them as needed.

Unless you run a professional shop with extensive saw use, tire replacements will be few and far between. You can buy tires with the original composition or opt for urethane tires. Urethane tires cost more but have a significantly extended lifespan.

There are many online videos covering new tire installation. Watch a few carefully before undertaking the task. While not terribly difficult, following their recommendations will improve your success rate while avoiding the agonies suffered by the under-informed.

### Tire cleaner brush

Keeping your tires clean of debris may seem trivial, but doing so will extend their life and enhance their performance. A cleaning brush placed on the lower roller removes debris from the tire as it rotates, and this usually prevents sawdust buildup on both tires. Less common is a second brush installed on the upper roller. Check and clean the brush itself when you perform your periodic maintenance. Replace it should the bristles become tattered or missing. If your saw didn't come equipped with one, aftermarket tire cleaning brushes are available to fit most machines. They are modestly priced but well worth installing.



*The installed wheel brush (top right) came with the machine. The brush in the package is an aftermarket add-on.*

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Blade lubricant is quick to apply and is designed to discourage sawdust, sap, grit, and moisture from adhering to the blade.

## Blade lubricant

I have not used blade lubricant, but the theory behind it seems sound. Blade lubricant has little effect on the movement of the blade across wheels or through guides, and that isn't its purpose. Blade lube helps the blade shed material from the tooth gullets. This is especially helpful for wet, gummy, or oily woods, where sawdust and debris tend to clog the blade gullets and reduce their cutting ability. Most of us react by pushing harder on the stock to force the cut when this occurs, a practice that is dangerous and can cause the blade to bind, bend, or break.

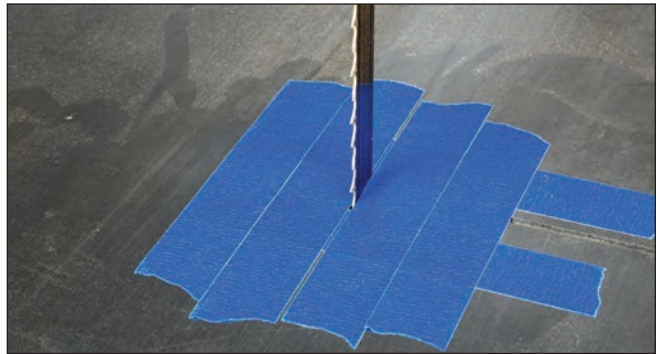
## Throat plates

As delivered with the saw, throat plates have a wide opening designed for blade passage when the table is tilted to its limit. Most saws tilt to 45 degrees, requiring wide clearance on either side of the blade.

A narrow or zero-clearance throat plate is far more useful for vertical cuts and will keep narrow pieces of material from being carried into the inner workings of the saw. There are aftermarket throat plates available in plastic and aluminum to fit most saws. These plates fit into the table opening for the plate and allow you to cut them at any angle.



The saw's original throat plate (installed) and zero-clearance aftermarket plates.



Blue tape offers a quick, cheap, but short-term solution for zero-clearance cutting.



A thin piece of sheet material secured to the table creates a zero-clearance cutting surface.

For the occasional zero-clearance cutting I do, I use blue painters' tape to mask off the opening. It doesn't get much more low-tech, but this DIY hack reduces the throat plate opening at a moment's notice. The tape wears quickly, but works fine for a few cuts.

Another method of creating a zero-clearance throat plate is to add a new table top over your existing table. You can easily cut a piece of



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Masonite or other material to sit on top of your existing table. Thinner materials will often allow your regular fence to function. Your added top can be made to fit precisely, or you can extend the surface area to create a larger working surface. When you create this added surface, you will cut a saw kerf for the angle of use. If it is intended solely for 90 degree use, you make a single saw cut to produce an effective zero-clearance passage integral to the top.

The new table top can be further modified with the addition of a properly sized guide mounted on the underside to ride in the miter slot. For those not needing a sliding table top, you can mount small blocks on the underside to locate and hold your table top in place over the existing cast table.

### *Resawing*

Resawing is common practice for those who do flat woodwork, but a rare need for most woodturners. But if you start to explore segmented turning, or want to add a decorative layer of wood to your turning design, resawing becomes a useful skill for a woodturner.

The fence supplied with your saw may be too short or impossible to adjust for blade drift. Many folks who resaw lumber either make their own fence or buy an add-on fence to guide cutting. Whether you need any of these devices depends on your saw and the material you cut, so make some test cuts before solving a problem that may not exist for you.

My resawing post (also called a drift bar) attaches to my regular fence, extending the height and providing a rounded edge for guiding the stock. The post is adjustable for position relative to the saw blade, allowing the fence to be aligned from front-to-back with respect to the blade to compensate for blade drift.

I own and use the Little Ripper from the folks at Stockroom Supply. This device attaches to my existing table and provides a sliding clamp

that secures material to be cut. It excels at cutting round stock, an operation that is otherwise difficult to do safely on a bandsaw. With its precision locating and tracking, I can consistently resaw dried Cherry to .012" (0.3mm).

### *Quick setting spacers*

If you need to set your fence quickly, repeatably, and accurately, you might consider a set of spacing blocks. These are precisely milled metal blocks that allow you to set cut widths at common intervals.

I use the Carter Fence Alignment System. Their blocks attach magnetically to the blade and include a relief slot for the saw blade. I can quickly bring the fence to position and set it for that thickness. While you can certainly make your own spacing gauges, these are convenient, well made, and will never lose accuracy.

### *Feather boards*

Feather boards can be helpful on the bandsaw in the same way they are on a table saw. The ability to secure material against the fence with spring loaded pressure frees the hands for other tasks.

There are several designs available, with two designs capturing most of the market. The first design uses an adjustable angled comb that anchors in the miter slot. It is adjustable for position, angle of the comb fingers, and distance to the stock to control exerted pressure. Another common design is a magnetic base with slide-out flexible surfaces. These flexible arms are used to press the stock against the fence. By positioning the magnetic base on the table, the angle, force, and position of contact is controlled. The magnetic base has a permanent magnet with a cam arm that allows the user to release the magnetic force and remove the feather board.

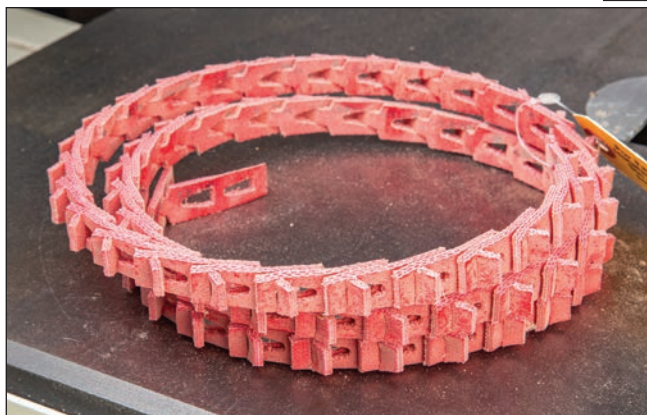


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### **Reducing vibration**

Vibration is rarely an issue with bandsaws, but it does crop up occasionally. Rather than randomly throwing new parts at the machine, you will need to do a little sleuthing to identify the source of the vibration. Potential sources include the drive belt, wheels, tires, motor (including mounts), or pulleys. Checking the drive belt for wear is a good place to start.

If you trace the problem to a worn drive belt, I recommend replacing the original belt with a twist link belt. I have not had the need to install this upgrade on my own bandsaws, but the improvement on my table saw was so dramatic that I am a firm believer in this design. Twist link belts are expensive, but a worthwhile investment.



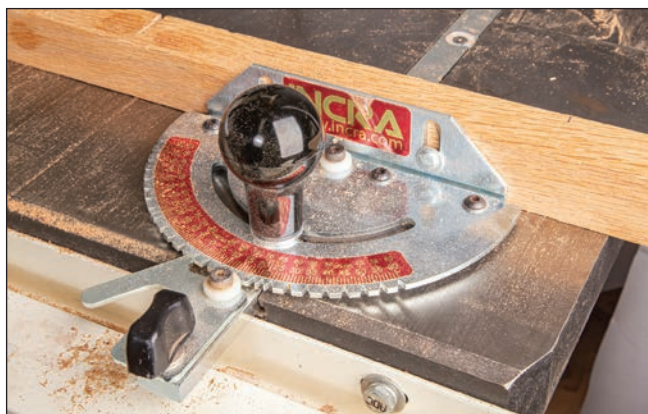
*Twist link belts are expensive, but they are easy to install, reduce belt vibration, and have a long life. You will need your original belt length and width to order the correct replacement.*

### **Replacement miter gauge**

The miter gauge on most bandsaws is usually a low cost, inaccurate affair that seems to have been included as an afterthought. The miter gauge needs to be accurately adjusted using a square because the markings or lock points are most likely inaccurate (see my May 2019 article in *Woodturning FUNDamentals*, “Bandsaw: choosing, setting up, adjusting”).

Mount a sacrificial board to the miter fence to extend its reach and increase the accuracy of your settings. You can cut through your stock into the sacrificial fence and simply replace the fence as it becomes tattered.

If you need a miter gauge that is more accurate by design and has lock points at the commonly used angles, consider one of the aftermarket gauges available from a number of well-known manufacturers. Any of these products will need minor set-up after the miter slot runners are properly tensioned. Once zeroed, you can quickly and accurately set your miter gauge to provide support for angled cuts. I still recommend attaching a sacrificial fence for all the benefits it provides.



*There are many aftermarket miter gauges to choose from. Almost any of them will outperform the OEM version.*

### **Bowl blank templates and jigs**

Whether from flat stock or logs, bandsaws excel at cutting bowl blanks. A compass works well for marking out flat stock, but split logs present a challenge. To be safely cut, the split log needs to be flat side-down against the table. The curved outer surface resists easy marking. One solution is to make a set of cardboard templates. You can also make them from plywood, plastic, or any other material that is softer than the bandsaw blade, but cardboard is cheap and plentiful. Shipping box cardboard works best because it is thick and durable. Any cardboard lets you cut into it without safety concerns.



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A cardboard template pinned to the blank with a nail (left) provides a safe, low-tech, replaceable routine for cutting out blanks. The Round Ripper (right) is the high-tech answer to this task.

Lay out circles on your cardboard stock with a compass and cut to the line with scissors or a razor knife. If the compass pokes a hole at the center—great—you will be inserting a nail through there anyway. Make a stack of templates at various sizes—1” graduated circles serve most needs.

Position your template on the outside of the half log and tack it in place with a finishing nail. Cut around the outer edge of the cardboard to release the blank. Once cut, prominently mark the center point where the nail was driven to indicate the central mounting point. You can also use the template to locate the center point on the flat side, just don't cut the blank on the bandsaw with the flat side-up. These templates are equally handy on slabs.

If you have neither compass nor template at hand, a push pin, string, and a pencil can be used to mark circles. Old fashioned for sure, but there isn't a less expensive, infinitely adjustable, and size-unlimited circle marking system.

### Conclusion

If you would like more background about bandsaw design and function, I recommend Mark Duginske's books and the [Iturra Design catalog](#) by Louis Iturra. My local Woodcraft has nearly everything I described in this article on the shelf, and everything I describe here should

be available at your local woodturning or online retailer.

For turners, a bandsaw is probably the most important piece of equipment after a lathe and a grinder. Whether new or old, large or small, they all basically work the same. Once tuned up and adjusted properly, you'll find it a valuable asset requiring little maintenance. The bandsaw is a versatile machine and the topics I've covered here are only part of the story.

There are many more changes, improvements, and accessories you can make or add, and your approach will be driven by any issues that you need to address, as well as how many roles the saw will play in your shop. Between my May 2019 *Woodturning FUNDamentals* article and this article, you should be in good shape to setup, adjust, maintain, and use your saw effectively, efficiently, and safely.

*Kurt Hertzog is past president of the American Association of Woodturners, a Pen Makers Guild council member, and past chairman of the Rochester Woodworkers Society. He has had over 185 woodturning related articles published internationally since 2012. An avid turner in all areas, Kurt is particularly interested in pens and ornaments. You can see his work and published articles at [kurthertzog.com](http://kurthertzog.com).*

