

Kurt's clinic

Kurt Hertzog answers readers' questions

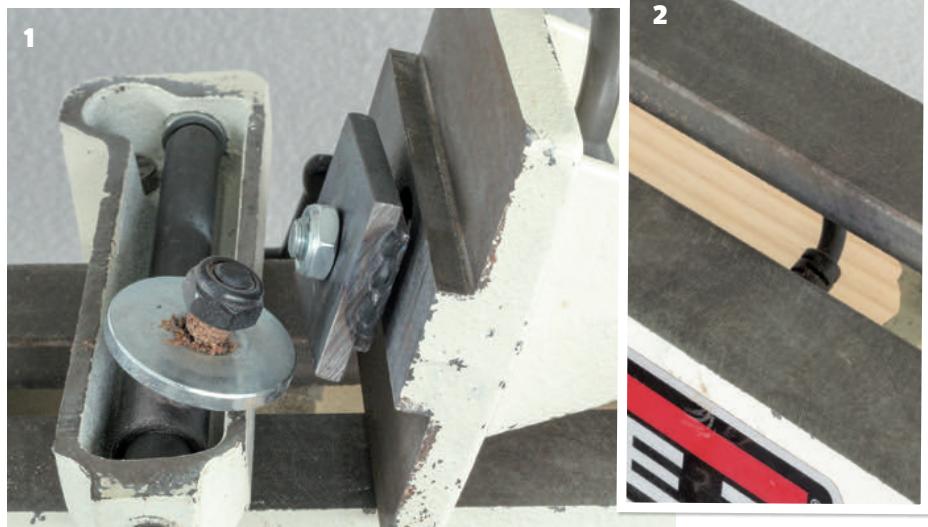
My mini lathe tailstock will hardly stay in place even with serious tightening. I've seen people put extensions or even a piece of pipe on the tailstock lever for leverage. There must be a root cause fix.

You are the first person to ask to fix the root cause. After 40 years as a process engineer, identifying and solving the root cause problem was a way of life. The root cause of your problem isn't the length of the lever on the tailstock. It is a force problem. You are applying more 'push away' force through the tailstock than you have 'clamp in place force' through the lever arm, eccentric cam, clamp block underneath the ways, and the friction between the ways and the contact of the tailstock undercarriage. Most will put a piece of pipe on the lever arm to apply horrific amounts of clamp force to the cam and clamp block. Usually, the result is a broken cam. The root cause fix is twofold. See if your workholding methodology requires such high clamp loads. You can often improve your workholding and drive techniques to reduce the tailstock force to something more reasonable yet still safe and effective. The easiest and most effective fix is to increase the friction between the ways on the lathe and the tailstock undercarriage that contacts the ways.

The two fixes I've used over the years are: rusting the ways on cast bed lathes or a light sanding of the ways and/or tailstock undercarriage interface. By rusting I mean a light brown discolouration of the ways. A batch of wet paper towels placed flat on the ways will provide a light rusting by the time they dry, often the solution needed to increase the friction to allow for more clamping force.

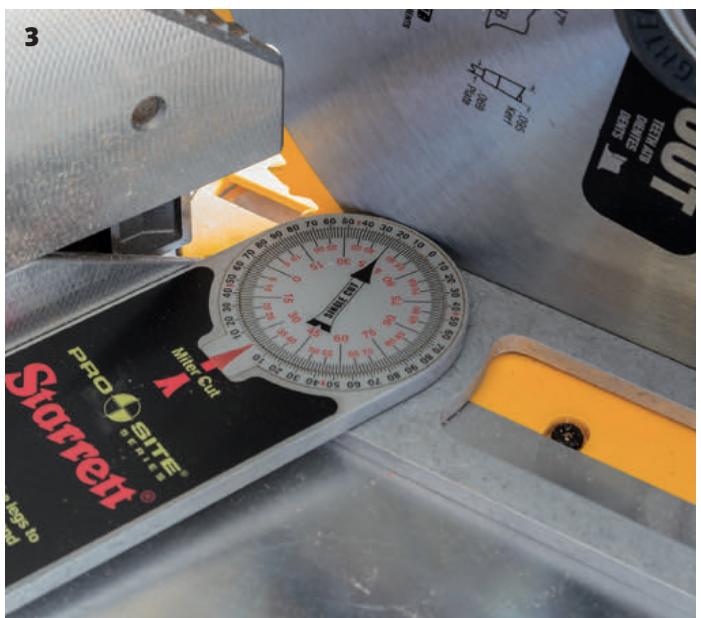
I see all the beautiful, segmented pieces shown in the various forums. How do I get started without getting too crazy with pictures, scenes and feature rings?

You can get started with segmented turnings with a piece of plywood and a chop saw. One of the most important aspects of segmented work is setting up your saw (whatever kind) and properly cutting your pieces. The error of fractions of a degree in cutting angle can lead to catastrophic results when gluing up your rings. Once properly set, lock everything down and don't change a thing until you've cut and glued everything up. If you mess up somewhere and need to cut some additional pieces, you will thank me for telling you to leave the saw locked up with the accuracy you spend lots of time tuning in. Once you learn the cutting and gluing process for rings, you can take your design efforts (shape, size, thickness, etc.) to whatever level you wish. Feature rings and exotic designs are in your future. Key to success is mastering the saw set-up, cutting and gluing rings first. Then worry about creating world masterpieces. There are many excellent programmes that will help you with your planning and design. My column in WT 295, Your First Segmented Turning, will be a good primer on getting the fundamentals under your belt.



1 The mechanics of clamping the banjo and tailstock in place. Even with the much more effective homemade clamp block on the tailstock, a rusting of the ways works wonders **2** You don't need pitting or extensive rusting. A slight rusting will add sufficient friction to allow for normal tailstock clamping forces

Barring that, a flat wood block with a sheet of fine abrasive used to 'sand' the ways in a circular motion to add some additional friction will also solve the problem. Lest you get your shorts twisted, neither will do damage to your lathe. You won't sand your ways out of true. By rusting, you won't change the ability to easily slide your tailstock to and fro as needed. Adding a bit of rust is my favoured choice. When you see someone waxing the ways on their lathe to slide the tailstock more easily and to prevent rust, chances are good that they will be candidates for replacement clamping parts for their lathe. They are usually the folks with the custom-turned tailstock clamp lever extension that adds six more inches of leverage.



3 Never believe any of the pre-sets on your equipment. It isn't accurate enough or repeatable for segmented turning. Get close with your instruments and zero in by cutting, gluing, checking and adjusting



I have a batch of pens with a CA finish that have developed a 'crinkly' look. It seems to be only from one of my pen storage/display cases. What is going on and how do I fix it?

I'm puzzled by two things in your question. First, what is a 'crinkly' finish that has developed in a CA finish? Second, to my knowledge, a properly applied and cured CA finish is about as impervious a finish as I've ever found. Did all the pens in that box develop that problem? Did the other pens, same finish I trust, in the other boxes not develop any problems? I don't have any magic solutions other than not using your troublesome display case. If it is the cause of finish degradation,

give it the ditch. Over the years, I've had other finishes, lacquer being one, that have been attacked by chemicals from plastics. That said, I have never had a CA finish degrade from any normal situation.

Once properly cross-linked, the CA adhesive is a plastic that is both mechanically and chemically resistant to nearly any normal situation. Sure, you can sand off or seriously scratch into a CA finish but you really need to try. As for fixes... I've never been successful at repairing any CA finish that was a problem during application or that had been thoroughly abused. My repairs always required sanding off the original and reapplying the finish.



A My goal for pens is a durable finish that doesn't look too plasticky. I want the wood protected well but also for the beauty to shine through **B** CA adhesive is my finish of choice. Easy to apply, low cost and resistant to mechanical and chemical attack. In my opinion, the most durable pen finish **C** CA lifetime. A daily carry pen of mine that is probably 15 years or more old. Due for a hardware change, the fifth replacement for this actual pen, the CA finish is the original



4 Tuning the angles and stop blocks is fiddly work. Cut, glue, check and repeat until it's perfect. **5** Cut and glue scraps until you achieve a perfect stack up of pieces. Here, zeroing in on the perfect 180° test pieces **6** You can learn the fundamentals of segmented work with small bits of flat stock



I want to add a chuck to my turning kit. Suggestions on what brand, size and options please.

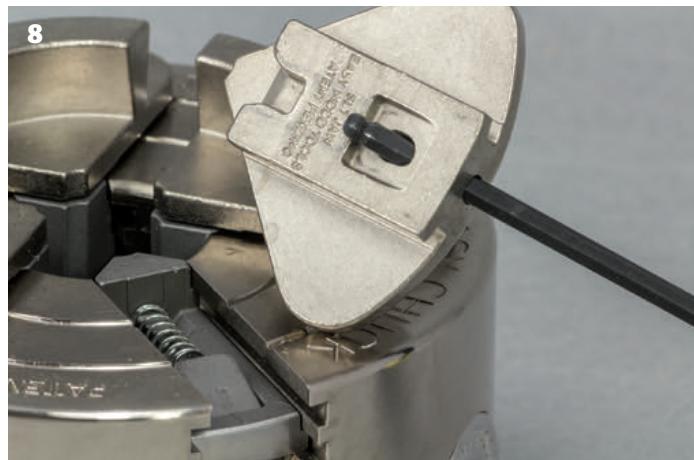
I always hesitate to suggest brands in any of my answers for several reasons... I think the brands I currently own and use are great, or I would have changed them long ago. That said, your geographic location will often play a large part in what is offered in your area. Also, your local retailer usually stocks a couple of brands that they can get readily and offer the price/performance that their customers want. Another reason is that it would be unfair to tout one brand while ignoring many others. In my

opinion, there are two levels for nearly all the turning tools and equipment. One level is made and marketed with price being the main driver. Quality, reliability, expandability, serviceability, repairability and end user satisfaction is not the driving priority. Often, buying anything in this category is a temporary situation until replacement with the other level product takes place. The second level are products that are higher in price but deliver all the features noted that make the price difference worthwhile. I suggest you borrow and use several different brand chucks from your fellow turners. Trying them and experiencing any shortcomings will

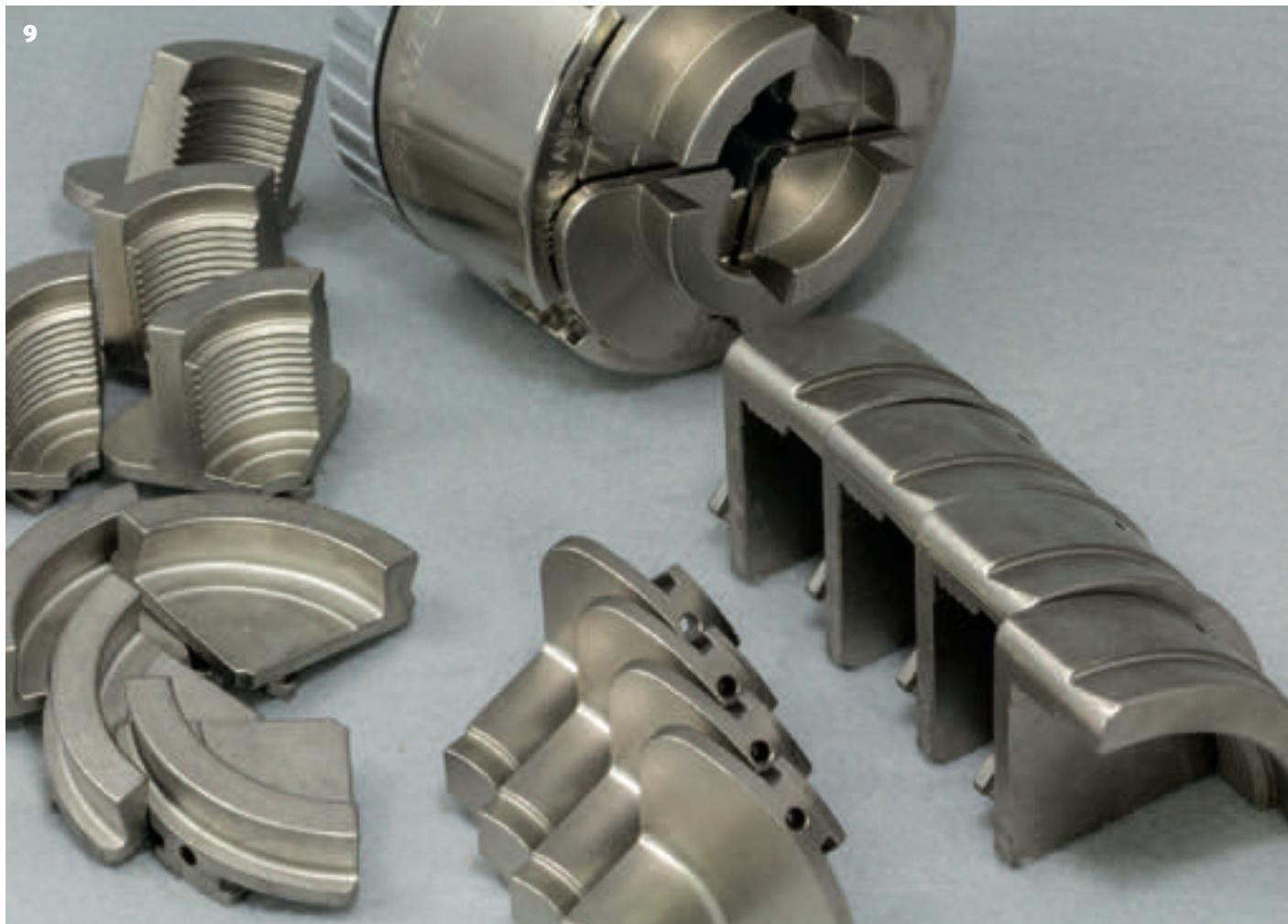
point you to the short list. Think through your current and planned needs. This can also help narrow your selection by which brands offer the options you will want. Jaw sets are key to safe workholding. Pick a company that offers the family of jaw sets for now and your planned future needs. Size is the same try-out and plan arrangement. You will likely own more than one chuck body over time and many jaw sets to cover your needs. For more background, you may want to review my 13-part Workholding Aids & Chucking series, *WT 238–250*. You'll have plenty of reference to work with as you narrow your selection.



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7 Over time, you'll probably wind up with more than one chuck along with an assortment of jaws. Your workholding needs will usually expand as your interests and skills grow **8** If you plan on having one chuck and a batch of different jaw, consider one of the chucks with quick-release jaws **9** There are several families of chucks with quick-release jaws that have a good selection of jaws. Changing these jaws is easy and quick