

BY CASEY CREAMER

## Fix it Properly if You Want it to Run Properly

**W**hen a new customer makes the arrangement to come to my shop for the first time to have their saw hammered, I ask them if the mill will be running while they are at my shop. If the answer is no, I then ask them to bring their loose collar, their sharpener, and their swage (if they are using one) with them. This is an excellent time for me to get this new customer started out on the right foot.

The theory is that something must be wrong for them to decide that it is time to get their saw hammered. Maybe they weren't happy with the way their previous saw smith was hammering their saws. Or maybe the saws were being hammered properly, but they still didn't run properly. Maybe this is their first experience with getting a saw hammered. Something must not have been working right. They didn't ask me to come out and troubleshoot their mill because they are assuming the saw just needs to be hammered properly.

Chances are the saw needs some work, but there is just as much chance that there is also some other issue that will prevent

the saw from running properly after I have benched it. It is to my advantage to get these things sorted out before this new customer unsuccessfully tries to run the saw that I just worked on.

I ask them to bring their sharpener for a few reasons. First, are they using a sharpener, or are they trying to get by with just a handheld file? If they are just using a file, I have a discussion with them about why that will not work out well for them. Yes, these inserted tooth saws are easy to sharpen because all you have to do is file the cutting face at the original hook angle and perfectly square: no compound angle, no top filing or side filing. Yet I can tell you that during my entire career I am still waiting to see the first hand-filed saw come into my shop that has been filed accurately. It can be done; it just doesn't ever get done.

If they bring their sharpener, I get a chance to see if it is a sharpener I approve of, if it is adjusted properly, and what condition it's in relative to worn parts. If they are swaging, I want to look at the condition of the swage and also talk with them about the pros and cons of swaging in general. If the top of the swage is mushroomed over, I know they are hitting it way too hard and they need some talking to. If the sides of the inside of the swage are overly worn, I know they are not holding the swage correctly. There are a lot of little things that could otherwise go unnoticed and cause a properly hammered saw to run poorly, which of course might inaccurately reflect on the quality of the work that I do.

As for the loose collar, I would rather have them bring the fast collar for me to check because that is the one more likely to have an issue, but there is a reason they call that the fast collar. A saw mandrel has 2 collars on it. We call one of them the fast collar because it is stuck fast to the shaft. I say stuck but it is actually fastened to the shaft by means of a shrink

fit. The size of the bore in the collar and the size of the shaft where it fastens are at exactly the right relationship so that the heated collar can be put onto the shaft and, when it cools, it will shrink exactly the right amount so it won't crack but will be permanently stuck on the shaft. The other collar is referred to as the loose collar because it comes loose when you remove the nut that holds the loose collar and the saw onto the mandrel. It's also the one that falls into the sawdust pit occasionally.

I have customers bring the loose collar instead of the fast collar because that is the one that is easy to bring. Although there is more chance for the fast collar to need work than the loose collar, at least I get a chance to give the loose collar a really accurate check, and if it is okay, I can then explain how they can check the condition of the fast collar on their own. And of course if the loose collar needs work, there is a good chance that the fast collar will need work too. And besides, once you work on the loose collar, if the fast collar is okay, you should still work on both so that you can match their outside diameters.

The picture shows an interesting example of a loose collar that was recently brought to me by a new customer. Those who know me can easily imagine some of the words that came out of my mouth when I saw that collar. Yes, that surface is covered with some sort of paper. Usually if you are going to paper a collar, it would be the fast collar, and you would do it with a narrow ring of paper on the outermost edge. Here we have the paper on the loose collar instead of the fast collar, and instead of a thin ring it is covering the entire bearing surface that is supposed to be tapered, with no relief inside of that. How is that ever going to work properly?

Years ago it was a fairly common practice for a sawyer to try to overcome a collar problem by cutting a narrow ring of paper out of a manila folder and sticking it onto the face of the fast collar, since it was usually the fast collar that would lose



A loose collar, covered in paper.



its taper, especially when you sheared the pins and the saw stopped while the mandrel continued to turn. This would deposit a bit of collar metal onto the collar line of the saw. Since we know that metal came from the collar, it is safe to assume that the loss of that metal from the outer edge of the fast collar managed to remove whatever taper the collar once had.

At that point you should pull the mandrel out, put it in a lathe, and resurface both collars and mate their outside diameters. But some of the old timers were too creative for that method. Instead, they could cut a very narrow paper ring and put it on the outside edge of the fast collar to sort of fake the needed taper. It was cheap and easy. Certainly a lot easier than having to pull the mandrel and then send it out to get it machined.

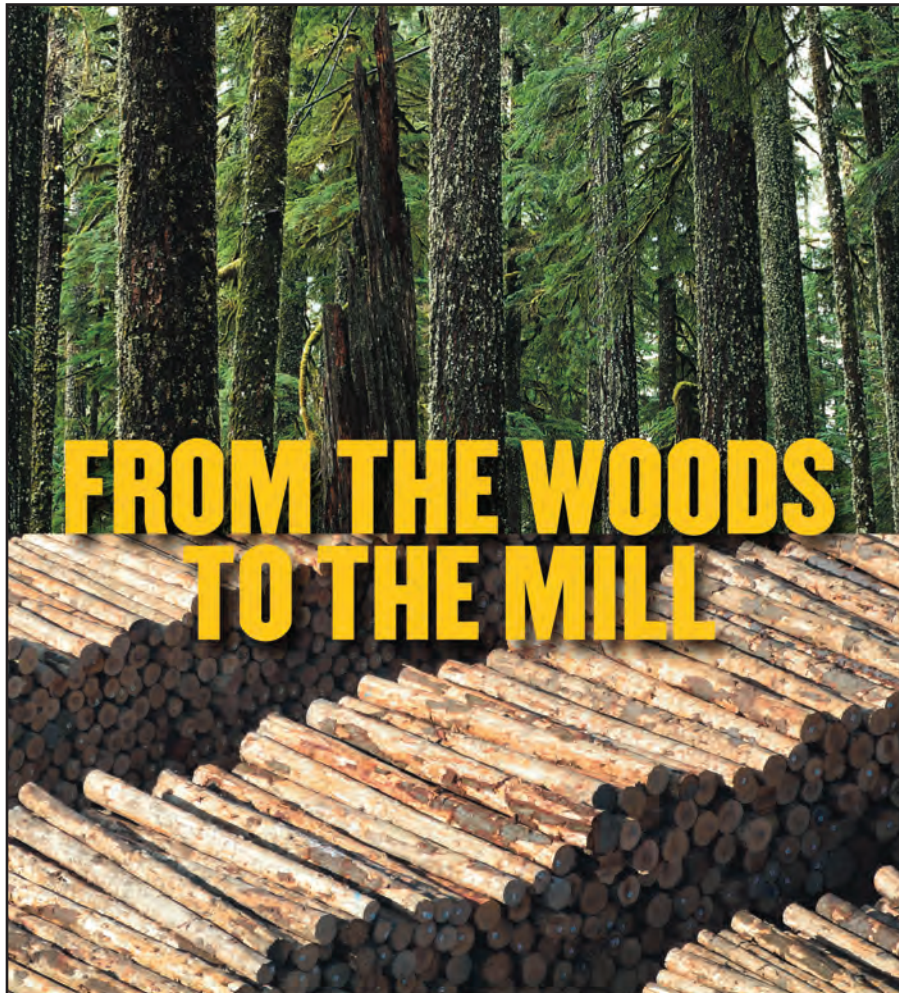
It was actually a nice little trick if you were trying to get the day's sawing done so you could bring in a crew overnight to fix the problem properly. Or even if you were trying to get the rest of the week's sawing done and fix it properly over the weekend. But more often than not, they would make this temporary fix and get happily back to sawing for the rest of the week. When they came in Monday morning, someone might ask about the paper on the collar, and there would be someone there who would say "if it ain't broke, don't fix it."

Having the knowledge and skill to come up with an inexpensive and quick fix in a sawmill is to be commended. But only if that quick fix is truly used as a temporary measure and the real and proper fix is accomplished within a reasonable amount of time, in this case at least by the next weekend. But trying to continue to run a sawmill with a bunch of temporary fixes is just asking for trouble. Is it any wonder why they invented planers?

*Interested to learn more from Casey Creamer? You can watch our video on how Casey hammers circular saws on The Northern Logger YouTube page.*

*Just search for "The Northern Logger" on YouTube and click the video entitled "How to Hammer a Circular Saw with Casey Creamer." Please send future questions about sawmills and their*

*operation to Casey Creamer, saw doctor and president of Seneca Saw Works, Inc., PO Box 681, Burdett, NY 14818, (607) 546-5887. You can also reach out by email: casey@senecasaw.com.*



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