

SAWMILL FORUM

BY CASEY CREAMER

We saw about 10,000 board feet of hardwood on a good day with a circular mill. We usually only get about a month out of a saw before we have to send it out to be hammered again. Shouldn't our saws last longer than that?

Is the guy we send our saws to doing it right?

This is a question I get asked a lot. One of the differences between inserted tooth circular saws and wide band saws has to do with the sharpening process. Band saws generally have to be sharpened every 6 hours. The act of sharpening a band saw will tend to cause it to need to be benched whether or not the act of sawing caused any issues. When you sharpen a band saw you are grinding not just the tooth face but the entire outer edge of the saw. Because you removed metal from the rim of the saw, you have altered the tension, and as a result, that saw will need to be benched at that point. Because inserted tooth circular saws have replaceable teeth, when you sharpen them, you are only removing metal (or carbide) from the face of the

tooth, so you haven't done anything that could possibly change the tension in the saw just by sharpening it.

To get back to your question about your circular saws, there are a tremendous number of variables that can determine when it is time to have your saws hammered again. One of those variables that must be considered is your amount of tolerance for a saw that is not behaving properly. I have more than one customer who will arbitrarily bring their saw to me about once a year whether it needs it or not. The saw is usually in bad shape. I am looking at a saw that I haven't seen in a year or more from a production mill, and I see a lot of guideline wear on the board side from the sawyer trying to use the guides to steer the saw. Additionally,

I see that the bits have been sharpened purposely out of the square and high to the log side to try to keep the saw in the cut. I will bet that if I checked the lead on that mill I would find over an eighth of an inch instead of the recommended sixteenth.

In other words, this sawyer manages to run a saw forever because he is willing to just keep misadjusting everything he can think of to force the saw to sort of run okay instead of just getting the saw serviced when it needs it. That is definitely not a method that I endorse, but some mills just do it that way and it sort of works for them. I might endorse playing some of those games so you can get through the day's sawing so you can fix whatever is wrong at the end of the day. Or maybe you have to make due until you can get a chance to fix your mill on the weekend. Of course, if it is just the saw that needs to be corrected, you should have more than one saw so you can make the change when the saw is ready.

When it comes to how much tolerance one has for an ill-running saw, I learned very early on in my career that the mills that have vertical edgers seem to have very little tolerance for a saw that isn't right. When you have a vertical edger and your head saw runs off line even a little bit, depending on the direction, that vertical edger will either leave marks on the cant, or won't saw all the way through the edge board. Either way, the sawyer is instantly aware that the saw is running off line and something has to be done right away. That might just mean it is more than time to sharpen, or possibly that sharpening hadn't been done properly. Or of course, there is the possibility that the saw now needs to be hammered again or something else might be wrong with the mill.

When you don't have a vertical edger the sawyer may notice the saw sounding different, or heating and wobbling. The sawyer could possibly notice that the saw is not exiting the cut cleanly and rubbing the cant on the gig back. Then again, if the sawyer is not very astute he or she might have to rely on their grader or lumber handler to clue them in on



Notice how shiny the guideline is.



how bad the lumber is looking. And of course, the worst-case scenario is that the sawyer finds out how bad the saw is running when they are informed that a whole load of lumber has just been rejected by their customer. That horse is not only completely out of the barn, but it has already gone to dog food.

What else determines how long a saw will last before it should be hammered again? Let's first talk about how the saw was hammered. If the saw ran properly when you first put it on, chances are the person you send your saws to did a good job. If it just sort of ran kind of okay, that is another story. The saw was hammered close to right but not quite right enough. Or, on the other hand, maybe the saw was hammered properly, but you are having collar trouble or you are not sharpening the teeth accurately enough or even soon enough.

Beyond all of that, the harder you hit the end of the log with the saw instead of easing into the cut, the sooner your saw will be ready to be hammered again. The more lateral movement the rim sees, the sooner it will be ready. And then, let's not forget heat. Whether the heat comes from a warm bearing, a sliver that wedges up against the body of the saw, or just consistently feeding too slow and causing sawdust spillage it will be a problem. The heat generally starts on the log side of the saw. When one side gets warmer than the other, the metal stretches on that side, which will cause the saw to dish. If you heat and expand the log side of the saw, it will dish towards the board side and consequently run out of the log.

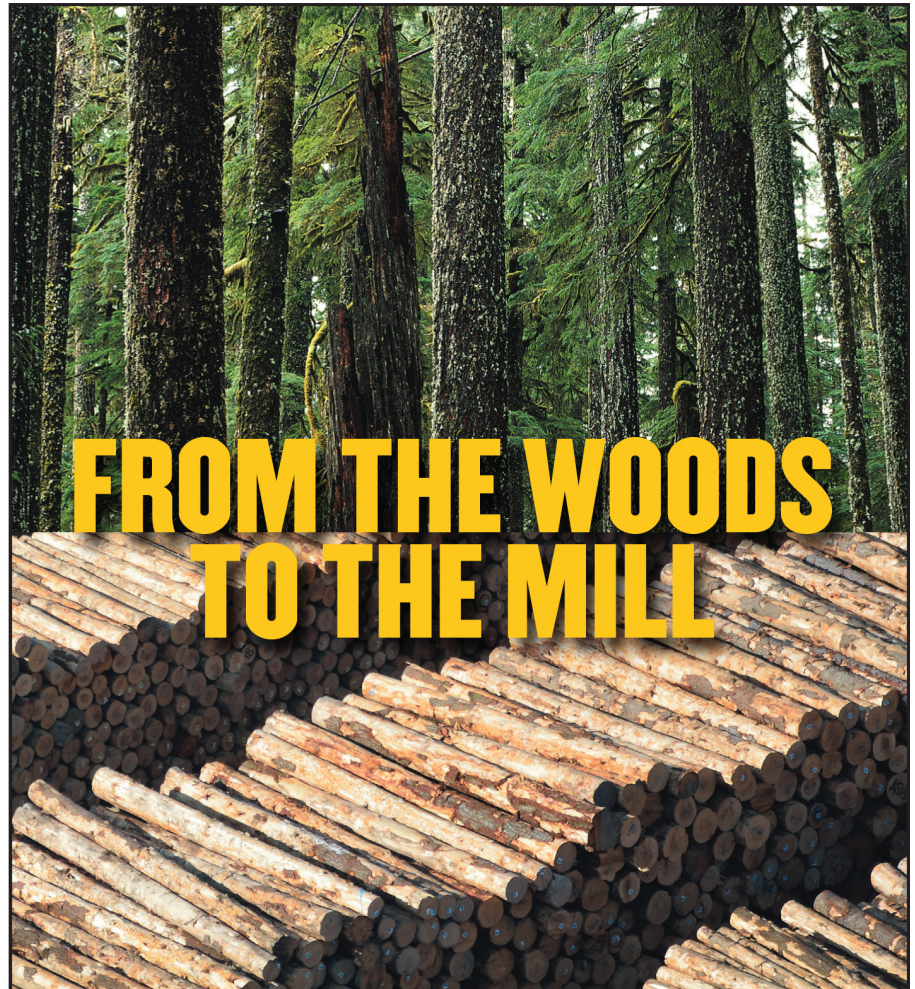
The more the saw heats, the more it dishes, runs out, and heats more and just continues to get worse. When the saw cools back down it might go back to being flat on the log side and having the same amount of tension it had before you heated it. Or when it cools, you may find it is still dished towards the board side, which will of course cause it to continue to heat and continue to dish and run out of the log. The more this vicious cycle happens, the sooner that saw will need to be serviced again.

So, if your saw is really running properly

when you first put it on, it is then up to how you treat the saw as to how long it will keep running properly for you. Once

it is ready to be hammered, continuing to force it to run is not going to do the saw or your mill any favors.

The Sawmill Forum is a bimonthly column. Search "The Northern Logger" on YouTube to watch Casey explain how to hammer a circular saw. Please send future questions about sawmills and their operation to Casey Creamer, president of Seneca Saw Works, Inc., PO Box 681, Burdett, NY 14818, (607) 546-5887. Email: casey@senecasaw.com.



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