

BY CASEY CREAMER

What is the best way to sharpen and maintain inserted tooth circular head saws?

Here is how over 95 percent of the circular mills operate when it comes to sharpening and maintaining their head saws: They shut down for break, and after letting the saw coast to a stop, someone (usually the sawyer) goes out and sharpens the saw with a handheld portable sharpener that sits on the blade. The lighting is usually poor as is the footing for this particular job. Time is also limited because the task must be completed before the break is over – then it's time to fire the mill back up. Because these sharpeners are handheld and mounted onto the saw, they will never have the potential that a stationary sharpener with a saw mounted to it has. Despite the awkward circumstances, some talented sawyers seem to manage to do a fairly good job at sharpening the saw quickly and accurately. Many others fail miserably at this task. And I can understand why. It is a tough spot to be in. While everyone else is relaxing on break, you have to quickly go out there and try to sharpen those teeth properly without the best tools, proper lighting, or even enough time to properly inspect the teeth before and after sharpening. This generally leaves you no time to take a spider gauge to check the side clearances on all of the bits so you can correct any inaccuracies.

A saw change should be like a Formula 1 pit stop.



That is just the sharpening part. What about the maintaining part? Well in this case maintaining means figuring out when the saw needs to be hammered properly and then getting that done. A few mills actually own a proper 48" straight edge so they can determine when their saw is no longer flat on the log side and thus is ready to be sent out to be hammered. Others wait until they get complaints from their green chain, or worse yet, from their customers about the lack of accuracy of their lumber. And then it seems there are still a few who wait until they see a couple of big blue spots on the saw or wait until the saw is so bad it is barely capable of rotating anymore.

A few mills will send a saw out as soon as it shows the slightest sign of not running properly, while others wait until the saw is bad enough that they think it is worth making the trip to get the saw fixed. And then, depending on who they send it to, either they can count on all of their saws coming back consistently properly hammered and ready to run correctly, or maybe they are sending them to an operation that would be better described as "hit-or-miss." Kind of a gamble I guess.

So, that is how most circular mills operate, and many of them seem to be satisfied with this. I suppose I can't come out and say they are wrong. But I would

certainly recommend a completely different way of getting the job done. What I am about to recommend will not work very well for a small handset mill just because they don't have enough production to make the method cost-effective and by the same token, their downtime costs should be low enough that saving downtime doesn't save enough money to pay for the needed change. On the other hand, in a higher production setting with much higher downtime costs, my method should pay for itself in short order with the reduction in downtime and the increases in both accuracy and production.

Here is what I have recommended to a number of mills: Treat your circular saw as well as most band saws are treated. Only a few have actually tried it, but it seems to work very well for those who have. Build a filing room in a location convenient to the headrig. When it is time to sharpen the saw, take it off and roll it into your filing room. Put a fresh saw on the mandrel so the sawyer can get back to what they were supposed to be doing – making lumber.

While the mill is running and the sawyer is producing good lumber, your filer/anvil man should bench the other saw to see if it is still within a running tolerance or if it needs to be touched up a little. Maybe it needs a complete hammering, but most likely it just needs a little touch-up. All steel has memory and saw steel is no exception. The longer you try to run a bent saw, the more bad memory it has. And the more bad memory, the sooner it will go back to being bent when it takes on a bit of heat. Conversely, the more the steel remembers being straight, the less a little bit of heat will affect it because it mostly has good memories to revert to. The idea is that it is better to keep touching up the saw as soon as it gets just a tiny bit out of spec than it is to wait until it is a complete train wreck to fix it.

So, you bring the saw into the filing room, and your in-house anvil man checks to see if it needs even a little bit of hammering. If so, you get that done. Then you put it on a stationary sharpener and with good lighting and good footing and



with all the time in the world, you devote yourself to getting the teeth fitted properly. That means first inspecting them properly. Then do a really good job of sharpening and making sure that when you are done sharpening, you gave good accurate corners on all of the teeth and that the side clearances are consistent and sufficient on all of the teeth. Now you can put the saw in the rack with the rest of your saws that are truly ready to go for the next time you shut the mill down for sharpening. There are some who even add a brake to their electric motor so they don't have to use expensive downtime just waiting for their saw to gradually coast to a halt. This way a saw change becomes more like a Formula 1 pit stop. As it should be.

I have heard some say it takes too long to make a saw change because they have to make all sorts of adjustments from one saw to the next to make them run properly. Whether you change saws to sharpen or

sharpen in place, if you have to make adjustments to go from one saw to another, it tells me a couple of things. Either you have been running the last saw way too long and have misadjusted a number of things to try to keep it sort of running okay, and/or your saws are not being hammered in a consistent manner. When saws are hammered accurately and consistently they should all stand in exactly the same place when you put them on the mandrel.

What may seem like a somewhat revolutionary idea here is actually no different than the method band mills have been using to sharpen and maintain their saws for years. The only slight difference is that the bandsaw filers will typically sharpen the saw first and bench it after, because the sharpening affects the tension in a bandsaw. But with inserted tooth circular saws, the sharpening will absolutely not have any effect on the tension of the saw and if you sharpen after benching you don't

have to worry about possibly nicking a tooth during the benching process.

Imagine always being only one saw change away from a saw that is properly sharpened and properly hammered and truly ready to run, instead of sometimes having to limp along with a saw that runs, but doesn't run great.

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.

STRONGER, TOUGHER, SMARTER, FASTER

BLUELINE

THE BLUE LINE SERIES - .404"



DEALER ENQUIRIES WELCOME

THE BLUE LINE SERIES - VYKING 3/4"



IGGESUND FOREST

Along with the numerous benefits Blue Line has to offer, we are excited to introduce the Blue Line with an Open End mounting system. The Open End system will make changing bars even quicker and bar maintenance time will also be dramatically reduced.

Our most powerful 3/4 bar to date, the new Vyking series can handle any and all conditions. Featuring an advanced metal alloy, HD power tip for optimal performance and lifetime, and revolutionary endurance rails with a 60o rail angle. All these benefits will reduce downtime and increase productivity.



www.iggesundforest.com (519) 754-2190 info@olofsfors.com