

BY CASEY CREAMER

Does a new saw need to be hammered?

The simple answer is yes. That leaves me plenty of room here for the complicated part of the answer. All new inserted-tooth circular saws come from the factory having been hammered and are considered to be in ready-to-run condition. It is common during the manufacturing process to have to hammer each saw more than once. Every step that removes metal from the saw – such as surface grinding, drilling, boring and socket milling – changes the tension in the saw. In some cases they will preload the saw with some extra tension in hopes of counteracting the tension that will be lost as a result of machining. And then loading the saw with a set of bits and shanks will stretch the rim enough to drastically change the tension again. Keep in mind that when you hammer a saw that has a tension issue, you still have to work leveling into that process. Saw hammering is always about working the tension and the leveling together as part of the big picture. Even something as innocuous as stamping the serial number into the saw will

create the need for some more leveling to counteract the number stamping process.

There are times during that manufacturing process where the saw may look like it has had a major wreck, but in reality that is just part of the regular manufacturing process. Even the all-important heat treating process can create some real challenges for the factory saw smith.

Some think that a new saw hasn't been hammered yet because they don't see any hammer or roll marks. In the factory, near the end of the process, they will do a final polish, or finish grind, which should remove most of the marks. And then they recheck the hammering to see if it needs a little touch up, which it often does. That's why you may see just one or two roll marks on a new saw.

But wait! There's more to this. Remember how I said all of these saws leave the factory in what is considered ready-to-run condition? That's true, but "ready to run" is a relative term. Any new saw that goes through me never goes directly from the factory to the customer. I insist that I get a

proper look at each and every one before it goes to the end user. The first thing I do is check all of the things that can't be corrected in my shop. That means the surface grinding, the socket geometry, the socket centrality and a number of other details. I even check the bore diameter. Most of these saws use the standard 2" bore. But a 2" shaft will not fit properly into a 2" bore. So, the bore is supposed to be oversized by about two thousandths. That's not much, but if that extra .002" isn't there, the saw will not slide on and off of your arbor easily. That is the kind of thing that will cause any saw to not run properly and can elude many a troubleshooter if they don't remember to make that specific check during their troubleshooting process.

Imagine a saw gets shipped directly from the factory to the customer with the issue of the eye not being slightly oversized. Not all sawyers are aware that if a saw doesn't slide easily on and off the arbor it will not run properly. So, they force the saw onto the arbor and before they are done sawing the first log, it is already having problems. They call the distributor, who advises them to ship it back to the factory because it didn't perform properly. The factory may not think to double check that bore size. So, they check the saw and either find that it looks okay, or they may find that the saw is now severely dished to the extent that they know they didn't send it out that way. You can imagine the rest of the disappointing process.

That's why before I send a saw to a customer, I want to see with my own eyes exactly what I am sending them. After checking all of the stuff that I can fix (I can enlarge the bore if needed), I go ahead and check the hammering of the saw. Let me first say that the new saws that came from the different saw factories in the 1980s were often not even close when it came to their hammering. Through the years that situation has gradually improved quite a bit. Remember these saws are made by human beings, and anyone can make an occasional mistake. In the '80s it was



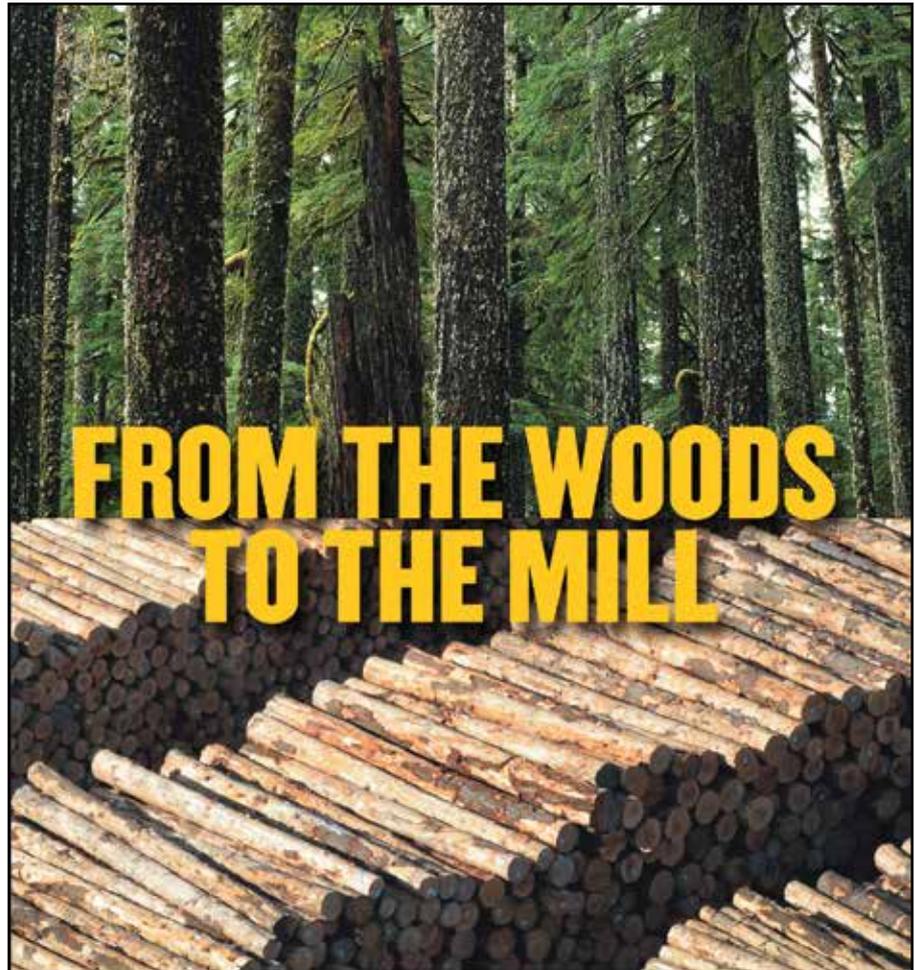


common for the factories to load the saws up with way too much tension to sort of hide whatever leveling problems the saw still had. Thankfully I never see that sort of problem anymore from any of the saw factories.

But I will say that I have yet to see a new saw from any saw factory that I didn't think needed some more hammering before it met my specs. Remember the relative term of "ready to run." Nowadays, when the saws are better machined and better hammered than they used to be, I would say that most of the saws I see from the factories will probably run okay as they are. But I want to deliver a new saw that does a lot better than just "run okay." The fact that it will most likely run okay doesn't mean it is up to my specs of flat on the log side, acceptable amount of runout, and the right amount of tension in the right location. Mostly they just need a little bit of touch up to get to what I want them to look like. And let's remember that during the manufacturing process, the saw smith had to work on a train wreck of a blade more than once before they were ready to send it out. It stands to reason that they are not in the position to get it as close as I would.

Some of my customers have specific needs, such as maybe their sawyer feeds a lot faster than most sawyers, so I have to adjust the tension accordingly for the saws to perform properly on that mill. The saw factory doesn't have that sort of intimacy with the end user to draw from, nor do they want to add that sort of complication to their process. I write this column every month, but it is the editor who does the final touch up to make it read properly. I guess you could say that I am doing the final edit on the saws to make sure they have the correct grammar and such. The hard work was done at the factory.

We have all heard the expression that they don't make 'em like they used to. When it comes to these saw blades, they actually make them much better than they used to. Because they have inserted teeth so they don't lose their diameter as they age, I occasionally get to work on



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saws that were made over 100 years ago and also saws that were made in the '50s or '60s. I can tell you that today's saws consistently have much better steel and much better machining, and they are hammered much better.

Many wide band saws are also sold as "ready to run," but I know that many bandsaw filers will bench every brand new saw before they run it just to make sure they know exactly what they are putting onto their mill.

I suppose it all comes down to just how picky the sawyer or saw doctor is.

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.