SAWMILL FORUM

BY CASEY CREAMER

I have been having trouble with my saw heating in the middle and running out. Everybody I talk to tells me to give it more lead. I am running close to an eighth inch right now. What should I do?

The first thing you should do is to find some people who better understand what lead is actually for and how to make a sawmill run properly. It has been a very common misconception for many years that you can cure whatever ails your sawmill by just giving it more lead. If you want to make a fairly quick adjustment so that you can finish today's sawing, you might be able to get away with temporarily compensating for the problem by running a little more lead. But then it is time to figure out what is really wrong with your mill and fix it properly, and then reset the lead to the standard 1/32" to 1/16".

People who try to fix a sawmill by just giving it more lead (regardless of how much lead it already has), I assume don't really grasp the concept of why we even have lead to start with. I often like to ask new customers why they think we put lead in our saws. I usually get answers like, "So the log doesn't rub the body of the saw and create heat." Or "to counteract the natural tendency of the saw to run out of the log." Rarely do I hear a plausible answer to the question.

The way to prevent the log from rubbing the saw is to have a saw that is flat on the log side, teeth that have enough kerf, with equal side clearances, and collars that don't dish the saw. The way to prevent the saw from running out is to sharpen it accurately enough and often enough.

The first rule of life should be, don't adjust anything unless you fully understand what the thing you are about to adjust actually does. Lead in a mill saw has only one fairly simple purpose. It is so that the blade is doing the cutting with the front of the saw on the downstroke and not with the back of the saw on the upstroke. If the saw was perfectly parallel to the travel of the carriage (zero lead) you would be drawing twice as much horsepower by sawing with the front of the saw and the back of the saw at the same time. Additionally, the carriage and track are set up to assume there will always be some sort of downforce on the carriage. Part of that downforce is the weight of the log, and the other part is the fact that you are only sawing with the front of the saw on the downstroke. The only thing that keeps most carriages on the track is that combination of gravity and sawing on the downstroke only.

How many of you have had that heavy carriage jump the track simply because the saw momentarily got so out of whack that the back of the blade was also sawing on the upstroke and lifted the log and carriage just enough to have it come off the track?

One of the things that makes an unnecessary lead adjustment so attractive is that the lead is so easy to check. Although most of the people I talk to don't have a great understanding of what lead is for, they all seem to know how to properly check it to see how much lead they have. I will add one thing here. Assuming you check your lead from the first head block, go ahead and repeat the test from all of the other head blocks. Two reasons. If there is a bit of an S curve in your track, you might get a good lead reading from the first head block and then a negative reading from the second head block. The second reason is that if you are getting inconsistent lead readings from different head blocks, you either just got alerted to a track alignment issue, or you are not checking the lead properly. Either way, you need to be aware of that issue so you can correct it.

Now that you fully understand why sawmills have lead, and how much lead is considered to be the right amount, all you have to do is set the lead to be somewhere between 1/32" and 1/16". If you are still having a problem, get it figured out and fix the problem instead of creating another problem. When you do have problems, first determine whether the saw exits the cut cleanly or not. If the saw isn't heating and it exits the cut quietly and cleanly and doesn't snap back up at the end of the cut, then your saw is sawing a straight line. It just isn't the straight line that you wanted, so you have to fix the alignment.

If the saw exits the cut with some noise and drama and then stands back up and also rubs the log on the gig back, now you have to look at the saw, the teeth, the collars, etc., and figure out what is wrong.

If you are having trouble, there is nothing wrong with doing a quick check of the lead just to make sure that nothing has moved and you still have the required 1/32" to 1/16" lead. And if so, keep your hands off it. Fix the problem by finding out what is really out of adjustment and make that adjustment instead of misadjusting the lead or something else to compensate for the real problem.

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.*