## SAWMILL FORUM

CASEY CREAMER

SAW DOCTOR



When you go to someone's mill to troubleshoot it, what is your basic procedure? Like where do you start?

There are two somewhat different types of troubleshooting sessions. One is where you have a problem today, which needs to be resolved right away so that you can keep sawing for the rest of the day. Often, this type of situation is based on a problem that just showed suddenly as opposed to one that has been festering for quite awhile. I suppose you could call this an "immediate" troubleshooting session.

The other type would be a "complete" troubleshooting session. This is the sort of thing that arises from a problem that has been building for awhile, and the mill has scheduled a full-day troubleshooting session to not only find the immediate problem, but to check the entire mill to make sure there are no other issues that will lead to more trouble.

When conducting immediate troubleshooting, it is of the utmost importance to know and understand the symptoms. Once you know what the symptoms are, you want to find out what else happened to change at about the same time. For instance, was there a sudden cold snap that has created partially frozen logs? Was there a big change in weather that might have caused an inadequate foundation to move? In other words, something must have happened or changed for you to not be able to saw properly.



The basic principles of saw maintenance and mill alignment are nothing new.

I might hear something like "everything was fine until I sharpened the saw." I probably don't even need to come see your mill to figure out the cause of that problem. In any case, when it comes to immediate troubleshooting, I am mostly concentrating on the immediate symptoms and the chronology of what else happened at exactly the same time. I am not trying to solve all of the mill's problems. At this point I am looking for the main cause so that the mill can easily resolve it for now and get back to making lumber. They can dig a little deeper over the weekend.

If I don't have something in the chronology that points me in a specific direction, I will first ascertain whether we have a saw problem or an alignment problem. It is especially important during an immediate troubleshooting session to be able to zero in on the exact cause as quickly and efficiently as possible because the downtime clock is ticking. It is a totally different story when doing a full troubleshooting session, which I will explain later.

When troubleshooting a sawmill, the first thing I want to do is get to the main intersection and decide which of the two roads, or directions, to take. This crossroads is the intersection of saw trouble and alignment trouble. Both problems will lead to the mill producing unacceptable lumber, but it is important to figure out which of these

two directions to take first. To figure this out, all you need to do is observe how the saw exits the cut. If the saw does not appear to be heating or wobbling excessively, and it exits the cut cleanly, that means the saw is doing its job-sawing a straight line. That rules out a problem with the saw, because if the lumber is miscut and the saw is running properly, then it's most likely an alignment problem.You can turn onto "alignment road" without having to worry about all of the saw-related stuff that can be a problem. Alignment can be track alignment, carriage alignment, carriage wheel alignment, (Continued on page 29)

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headblock alignment, or even a creeping setworks. But at least now you are on the right road.

On the other hand, if it turns out that the saw is not exiting the cut cleanly and appears to be heating and subsequently wobbling excessively, then you can confidently turn onto the "saw trouble" road. If this is one of those immediate troubleshooting sessions, I would first look at how the bits are sharpened. Statistically speaking, that is the most likely cause of the trouble and since this is an immediate session, we really want to ferret out the root cause of the trouble as soon as possible and get it corrected and get back to making lumber.

Of course it might not be the bits. But I start at the bits and sort of work my way inward. Meaning that if the bits look okay, I then check to make sure the shoulders are not all bent a little to one side. If that is okay I look to see if the saw is indeed flat on the log side or not.

I also check to see if the saw while cold, wobbles excessively when being turned by hand. If the saw is dished and/or has excessive wobble, I will then determine whether that is the actual condition of the saw, or whether there is a collar or shaft problem that is putting the saw into that condition. And it just keeps going inward from there, like checking for bearing problems, and so on. Remember that the goal for this sort of troubleshooting is to find the main cause of the problem ASAP and then correct it. Now when we are talking about an all-day troubleshooting session, the goal changes and therefore the method has to change. The goal now is to try to find everything in the mill that is out of whack, mis-adjusted, or otherwise worn out in a manner that can be contributing to a problem. Yes, I still want to know how the saw exits the cut and exactly what the symptoms are and the chronology of what else may have happened that coincides with having a problem. But in this case I will still have to travel down both roads before I am done.

My method is to keep the symptoms in the back of my mind at first. Then I gather all of the data I can, such as how the bits are sharpened, what shape the saw is in, what shape the collars are in, how the alignment of the track, carriage and headblocks all measure up, etc.

Then after gathering and recording all of the data, I sit down and try to correlate the numbers with the given symptoms.Typically, I will write up a report that points out the major problem, or problems, creating the symptoms. I also devote some space to pointing out additional problems that may not be directly causing the reported symptoms, but will eventually cause some sort of trouble or inefficiency.

When you are doing the immediate form of troubleshooting, it would be nice to actually go ahead and get all of the needed data, but you generally don't have the luxury of the amount of time it takes to do that properly. At that point you are stuck with having to just get at the main problem and getting it fixed.

When doing a full troubleshooting session, you have to gather all of the

data, so it almost doesn't matter where you start or in what order you check as long as you are being fairly efficient about your data gathering.

## Questions about sawmills and their operation should be sent to Forum, The Northern Logger, P.O. Box 69, Old Forge, NY 13420, FAX #315-369-3736.

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