

SAWMILL FORUM

CASEY CREAMER

SAW DOCTOR



It is no secret that I do a lot of sawmill troubleshooting. What some of you may not know is that I use two totally different methods. One is the expensive way, where I charge a big fee to travel to your mill, check everything out, and report what I found back to you. Remember my saying, "Show me something that is 'perfect,' and I'll show you something you didn't measure close enough." So there isn't a mill that I can't find something wrong with. The question is whether what I find is within a running tolerance that you can live with.

The other way I troubleshoot mills is via phone and/or email. This is a totally free service based on the fact that I have no travel expenses and often I am able to work on saws while talking on the phone.

The basic troubleshooting process is fairly simple. You gather data, and then analyze that data to decide what you think is wrong with the mill, and what should be done to correct the problem or more likely, problems. Yes, it is common for a sawmill to have multiple problems. One issue might be the most direct cause of the trouble, while there can be a series of other problems that may be indirectly contributing to whatever trouble the mill is having. And of course there can be issues that are contributing to problems that nobody at the mill even knows about. After all, "running properly" is a relative term.

My theory is that almost anyone can gather data with a little bit of instruction and direction. So why do you need to spend a pile of money to fly me out to your mill to collect the same data that you can collect yourself? It is true that there is no substitute for having the so-called expert's eyes on the operation, but in most cases I can get the job done by piecing together the results of the data that you gathered.

And the difference between "free" and "a pile of money" is significant. On the other hand, there are some situations where we end up with me having to make an on-site visit for a variety of reasons, including the customer's inability to gather the needed data accurately. Sometimes an important part of the process is to have the mill ship me two saws: One that the mill thinks needs to be hammered, and one

that has been hammered and is supposedly ready to go. I have seen more than a few cases where I thought the "ready to run" saw looked worse than the one that was supposed to need work. In these cases I am analyzing both saws with a completely open mind. I am not looking to put down a potential competitor's work, but rather give the customer an accurate and unbiased report of what I find.

If I find that the finished saw doesn't look right, that's an important clue. But the saw that is supposed to need work can also tell quite a story. First of all, it will tell me what kind of sharpening job they are doing. Maybe the shanks are worn out and spilling sawdust. Maybe I can tell from looking at the saw that it is being fed too slowly. I can often tell a lot about the condition of the mill's collars by seeing the marks left on the collar lines of the saws. Or maybe the saw that won't run because it supposedly needs work, actually looks fine to me. That's a pretty clear indication that there are some problems in the mill itself that we have to look at.

I do get a fair amount of these free troubleshooting calls and it occurred to me today that they usually begin the same way.

The customer tells me that the saw is running out of the log. First I ask how it exits the cut. Does it exit the cut cleanly or not? If it exits the cut cleanly, then the saw is actually running okay, but there is an alignment problem which will create inaccurate lumber.

Nine times out of ten, the answer is that the saw does not exit the cut cleanly. That is often followed by "the saw starts out okay, but three feet into the cut you can see it start to run out of the log."

Now I know the main problem is somewhere between the mandrel and the rim of the saw. The fact that the saw starts out okay, but after a few feet starts to have a problem, usually indicates a problem at the rim. It could be bent shoulders, but most likely it is the way the saw has been sharpened. Of course at that suggestion I am often told that they put new bits in and still have the same problem. For some reason

they assume that a new set of bits eliminates the variable of them mis-sharpening the bits. On the contrary, they have just introduced a new unknown factor affecting what shape the new bits are in. One should never assume that a new bit is sharpened correctly any more than I would assume that a new mandrel has collars that are correct.

Anyway, the next step in the troubleshooting conversation is usually for me to tell them to take a very close look at how the bits are sharpened and to check the collars. I then go on to explain what I find is the most definitive and easy method for checking the collars.

Tighten the nut on the collar hand tight. Free up the guides and mark a spot on the rim with a marker. Set up a dial indicator on that spot you marked. Now tighten the nut with a wrench as you would normally tighten it and the move the saw back so that the dial indicator is again touching the spot you marked. Now just read the dial indicator to determine exactly how far the saw moved and in which direction. Many dial indicators have a large hand and a small hand. The small hand indicates the number of revolutions the large hand made. So note the position of the small hand before and after.

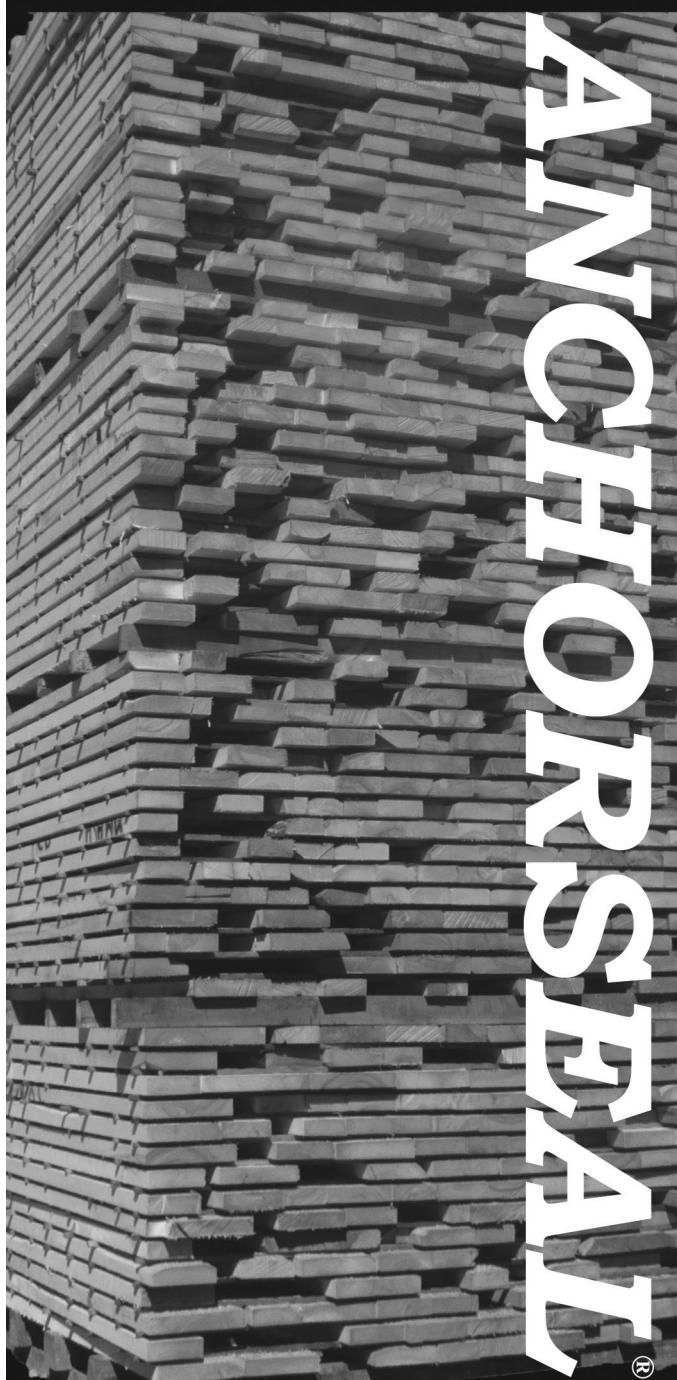
If you are too cheap to own a dial indicator, you can use a set of feeler gauges. Tighten the nut hand tight. Mark a spot on the rim. Use the thickest feeler gauge you have which might be .030" and set the guides so you have exactly that amount between the saw and each guide pin. Now tighten the nut, move the saw back to your mark and see where it sits in respect to your guides. If it is now up against the board side guide pin, you know that it moved at least .030." To complete the process you now need to back that guide off a little to see how far you have to move it to where it is just barely touching the saw. Now measure the gap between the saw and the log side guide pin. Subtract .030" from that and you know how far the saw moved towards the board side, and you also know that your collars are causing your saw to run out of the log.

I am happy to field all of these phone calls and emails, but I suspect that most of you can save yourselves a little time by checking the bits and your collars before you make that call, because chances are the first things I tell you to check will be the bits and the collars. Once you have gathered that initial data, feel free to call me if the troubleshooting answer isn't obvious to you at that point.

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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