

SAWMILL FORUM

CASEY
CREAMER

SAW
DOCTOR



One of my saws just doesn't seem to run right. It wobbles and it always seems to run out of the log. I took it to my local saw doctor and he said it looks okay even though he wasn't the one who hammered it last, but it still won't run right.

I have checked everything I could think of in the mill. The track is straight and I had the collars redone and I still have trouble with that saw. My other saw seems to run okay. Do you have any ideas?

You bring up an interesting concept in the world of troubleshooting that frankly seems to confuse many people.

It is very important to understand the difference between known quantities and variables. Known quantities are something that you should be able to count on absolutely, without question. When I ask you what diameter your saw is and you tell me that it is 56", I should be able to believe that response and should be able to consider it to be a known quantity. When you tell me that your collars are okay, it would be great if I could consider your answer to constitute a known quantity, but to me it is usually just another variable. I usually ask how you know the collars are okay, and based on how you answer that question, I decide whether I have one more known quantity or just another variable.

Often the answer is that the collars are new or recently redone. I know that a lot of sawmillers consider that answer to constitute a known quantity, but they are wrong. If all we know is that the collars are new, we essentially know very little about the condition of the collars other than the fact that someone intended them to be in proper condition. If you assume that the collars are okay, you would also have to assume that the collars were made by somebody who is not capable of making any mistakes, not to mention the question of whether they even know what the specs should be. Obviously that is not a good assumption, is it?

For the condition of the collars to become a known quantity, I either have to check them myself, or I have to have total confidence that the person who checked them and reported their condition to me checked them with a proper straight

edge under the proper lighting conditions, and that they then verified their findings by checking in some other manner.

For example, I like to first check the collars with a flashlight, straight edge, and a set of feeler gauges. Then I check them again by doing the "old tighten the nut trick" that many of my readers are so familiar with. If the findings of both of those tests agree with each other, then I believe I have a known quantity as to the condition of the collars. If those two tests yield differing results, I have to keep checking until I get an answer that I can believe.

In the case at hand, all you have are variables. You have one saw that doesn't run properly and another saw that does run properly. The first wrong assumption that most people make is that the saw that runs properly must be okay, while the saw that won't run must have a problem. While it might end up turning out that way, it is wrong to make that assumption in the beginning of the process. It is easily conceivable that the saw that runs properly, only does so because although it is not hammered properly, it runs fine because what is wrong with the saw happens to compensate for something that is wrong with the mill or the way the saw is sharpened, etc. And in that case a properly hammered saw won't perform properly.

Now you state that you had the saw that doesn't run right checked by a competent hammerman and he said that it looks okay to him. Assuming that your hammerman really is competent (which is not always a good assumption) just checking the saw over and pronouncing it okay does not constitute a known quantity in my book. This competent hammerman may be great at hammering saws, but not necessarily good at the sort of detective work needed for getting to the bottom of this sort of issue.

My idea of turning that part of it into some sort of known quantity goes like this: You find a hammerman who is not only good at hammering saws, but also good at troubleshooting mills. If you explain your problem to that type of saw smith, he will insist that you bring both saws (the one that works properly and the one that doesn't). He will then listen carefully to your symptoms and try to make the all-important

connection between your symptoms and what both saws look like. If the two saws perform differently, they should also look quite different upon being properly inspected. And it is that difference between these two saws that will easily solve your mystery for you. We not only need to know why one saw won't run properly, but we also need to discover why the other one does run okay. It may not be as simple as being hammered properly.

The other thing to keep in mind is that there is a difference between looking at a saw to see if it needs to be hammered and looking at a saw to try to solve a mystery. There are a lot of things to look at when inspecting a saw just to see if it needs to be hammered. This is the same check that any saw doctor would do to a saw that he or she is about to start hammering. If they intend to hammer it, they certainly need to assess what they are starting with to begin to devise the strategy of how they are going to fix it. If it looks okay they will say that it doesn't need to be hammered and feel good that they just saved their customer some money. At that point I usually call up the customer and question him as to why they thought the saw needed to be hammered. Sometimes it is just that it hadn't been hammered in quite a while, or that it had some sort of accident that they assumed would cause it to now need to be hammered, where in fact it managed to survive that accident.

Other times they start to report some symptoms and I figure out that the problem is elsewhere in their mill. Sometimes they just send the saw to me because they are hoping to end up with what they think is a known quantity in the condition of that saw.

The point is that when I check a saw for the purpose of untangling some sort of mystery, I tend to look a lot deeper into the condition of that saw than I would have to for a routine hammering. Once you get yourself into detective mode you start to look for things in the saw that would easily be overlooked during a routine hammering or even a routine inspection. You very carefully inspect all of the shoulders and also



Checking the saw with a 12-inch straightedge.

look very closely at the v-milling and the rest of the socket geometry. You also have to inspect the bits and the shanks a lot closer than you would for a routine hammering. Just as there is a long list of things you have to check at the mill during the troubleshooting process, there are also a lot of little things to check on a saw that ordinarily wouldn't necessarily be checked during the normal hammering process.

It's all about little by little taking variables or unknown quantities and turning them into legitimate known quantities. The more known quantities you uncover, the sooner you will solve the mystery and turn the solution into a known quantity.

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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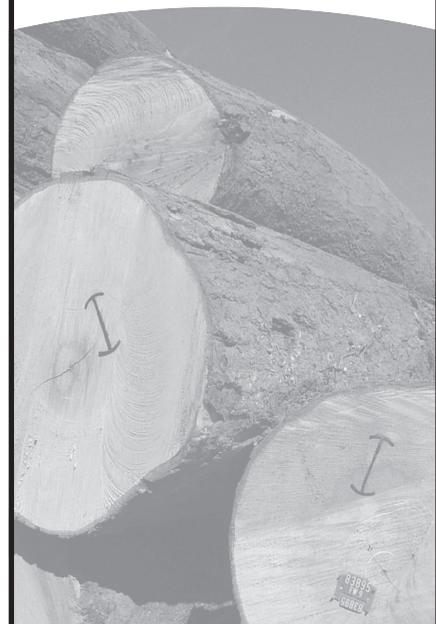
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