



How can I tell if the guy hammering my saws is doing it properly or not?

One would assume that if your mill is running and you are making lumber and showing a profit, then your saws must be hammered correctly. Unfortunately, life isn't that simple. You might be producing lumber and making a profit, but are you producing as much lumber as you can, relative to your equipment? Are you consequently making as much profit as you should be? If not, I suppose that is why you are asking the question.

The first place to start is to ask your hammerman to describe to you what his saws should look like when they are done. If he is at least aiming in the right direction, that's a start. But aiming doesn't guarantee success. Longtime readers of this column can probably tell you my version of what a finished saw should look like: flat on the log side, with an acceptable amount of wobble and the right amount of tension in the right location. "Acceptable" amount of wobble and the "right" amount of tension in the "right" location are relative terms. But flat is flat—if you are able to check it close enough.

If your hammerman tells you that he thinks the finished saw should be dished a little towards the log side, I would suggest that you have a problem.

If you get that sort of answer, you should then ask why the saw should be dished. For as long as there have been saw doctors, there have been those who think the saw should be dished towards the log side and then automatically straighten up as a result of centrifugal force when it comes up to speed. Then you have to ask, if the saw will straighten up at speed, why not have it straight to start with? Is centrifugal force going to somehow bend it off line when it comes up to speed?

Some say they dish the saw so that the log doesn't rub the body of the saw and heat it. Well, that's what saw kerf is for. And by the way, we need saw kerf (side clearance) on both sides of the saw. So if you dished the saw to clear the body

on the log side, the body on the board side would be heated by the board. And when you heat one side and not the other, the heated side expands and dishes the saw further. And if the saw was supposed to straighten up at speed, how would you prevent the log from rubbing the saw anyway?

Here's the deal: The saw should be flat on the log side and tapered on the board side. That way the kerf will prevent friction from the log or board rubbing the blade, and the saw will cut a straight line. As for the amount of wobble, I prefer plus or minus 15 thousandths of an inch or better on a 48" to 60" saw. Will a saw run okay with more wobble than that? It will, but the less wobble you have, the easier and better the saw will run.

As for the right amount of tension in the right location, that is more of a moving target that varies with a combination of the RPM of the saw, the species being sawn and the average feedrate.

If your hammerman puts up your saws to be flat on the log side with the same amount of acceptable wobble as I recommend, then all you have to worry about is the tension in the saw. Tension is one of those things that is hard to get an exact consensus on, even among your better sawsmiths. If your saw has a little too much tension it will be extra heat sensitive (as if they aren't heat sensitive enough). And if the saw is a little low on tension it will run okay, but will not be able to stand a real good feed rate. On the other hand, if the tension is way too much or way too little, it will be obvious that the saw isn't running properly.

Having your hammerman tell you that the saw is being hammered the way I think it should be hammered is a start, but saying and doing can sometimes be two different things. If your saws look, feel and act a little different each time, that suggests they are not being hammered properly. Even if your guy thinks he should be doing things a little different than I describe, they should at least be consistent. If your saws are consistently hammered the same each time, then we know

that your sawsmith has the ability to do it properly, but he or she might just need to be shown what properly really looks like. If the saws arrive at your mill in an inconsistent condition, then it really doesn't matter what the hammerman claimed they would look like. He just lacks the ability or ambition to do them properly.

No matter how good your sawsmith is, I recommend that you learn enough to be able to check your saws when they come back from being hammered. It's not that hard for you to determine that there is or isn't a problem.

All you need is a 48" saw maker's straight edge that you will hold vertically against the log side of the saw to see if it is flat on the log side. As for checking the tension, you won't be able to measure the exact amount of tension, but all you need to know is whether it is close to where it should be.

Here is what to do on that front: Every time you put a fresh saw on the mandrel, give it a shake and remember what it felt like. If that saw runs properly, keep remembering how flexible it was as what you are looking for. If it doesn't run properly, then you might make a mental note of what it feels like when it doesn't work.

Now that you have a way of checking for flatness and you have a feel for what the tension should feel like, you will also know when it is time to take a saw off and send it out to be hammered. Assuming the saw is completely cold when you are checking it, if it is dished either direction, you should get it hammered. By the same token, if that cold saw feels different enough when you shake it that you can tell it is different from what a good one feels like, then you have a tension problem that needs to be corrected.

This is not the most accurate or scientific method of checking the tension, but it should be enough for you to determine whether something is wrong or not.

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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