

SAWMILL FORUM

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When is the right time to take my saw off and get it rehammered?

That depends on a lot of different variables. First I have to ask what are you trying to do with your sawmill. Are you a low production sawmill just trying to make some fence boards for a farm, or a low production mill trying to make very accurate lumber?

Are you a high production mill trying to produce as much lumber as possible, but the accuracy isn't that important, or a high production mill where accuracy counts?

Let me first say that in my opinion, it is usually more efficient and therefore more cost effective to make accurate lumber instead of mis-cut lumber, even if your customers don't need or notice the accuracy of your end product. When your lumber is inaccurate, your saw isn't performing properly, regardless of whether it is the fault of the saw or there is some other problem in the mill. And when your saw isn't running properly, that is inefficient and no matter how big or small your mill is, that is wasted money. And I don't think any mill wants to purposely waste money.

I think all sawyers know when their saw isn't performing properly. The question is whether it is because the saw needs to be hammered, or some other reason. If the saw is heating, then it isn't performing properly. But, is it heating because you are not sharpening it accurately? Or is it heating because there is a problem with the collars dishing the saw? Or are you just feeding it so slow that it spills sawdust and heats that way?

If your saw is heating and running off line, there are a few things you can check to try to determine if it needs to be hammered or not. Of course you should first be looking at the teeth closely. Are they all slightly missing the log side corners because you hit a little stone in the bark or something? Do the bits have equal side clearance and enough of it? That is where most problems start on a circular saw.

If the bits are okay and the saw is still getting hot and not running properly, it is time to check the blade itself. Most circular mills don't own a four foot sawmaker's straight edge, but they should. That way if the blade has cooled completely, you can check to see if it is flat on the log side or not. As readers of this column know, a finished saw should be flat on the log side, with an acceptable amount of wobble and the right amount of tension in the right location.

So, it follows that if the saw doesn't meet all of those conditions at the same time, it needs to be hammered. If you own a real 48" saw maker's straight edge, you can easily check to see if the saw is still flat on the logs side or not. No a 48" carpenter's level won't do unless the saw is bent so far that you almost don't even need a straight edge to see it.



A sawmaker's straightedge is a precision tool.

As for checking the tension, what you should do when you put a freshly hammered saw on the mandrel is to grab the rim and give it a shake. Then make a mental note of how flexible the saw felt. Then the next time you are wondering if your saw has a problem or not, just give it a shake and see if it feels noticeably different from when you put the saw on. This assumes that you are checking the saw when it is completely cold because even a little bit of warmth will make the saw look and feel completely different.

If the saw feels like it should and you have verified that it is indeed flat on the log side, now you just have to check to see how much it wobbles. One note here. If it only wobbles when it is up to speed and not when you turn it by hand, that would suggest there is a tension problem, assuming the saw is cold at the time.

Every saw wobbles some. To check to see if it wobbles too much when turning it by hand, you will need a dial indicator and a magnetic base. Free up your guides and set up the dial indicator to contact the saw in the guideline. Then just rotate the saw by hand and see how much the needle moves. My idea of running tolerance in that department is plus or minus fifteen thousandths or less. Any more than that and that is excessive wobble and should be corrected by proper hammering. If you don't own a dial indicator, you can always use a feeler gauge set and the guides.

Adjust your guides so that when rotating the saw by hand, one guide just barely touches one spot of the saw. Then rotate the saw and set the other guide so that it just barely touches one spot on the other side. Now use your feeler gauges to measure the gap between the saw and the guide pin when the saw is just touching the other guide pin. When done properly, that should be the same measurement that you would get from a dial indicator, just more labor intensive and operator dependent. Dial indicators really don't cost all that much and wherever there are things that are rotating, you can use your dial indicator to accurately measure how true they are rotating.

So, the best answer to your question is as soon as you can determine that your saw isn't performing properly and it is the fault of the saw as opposed to something you can correct at your mill, it is indeed time to send the saw out and have it hammered properly so that you can go back to efficiently producing accurate lumber regardless of your particular needs

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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