

SAWMILL FORUM

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When it comes to smithing saws, can you do it all with just a stretcher roll? Is there any need for a hammer?

When I first started using a stretcher roll, there were some customers who would ask if I would be willing to only use a hammer on their saws. In those days very few smaller saw shops owned stretcher rolls for circular saws even though using stretcher rolls on band saws was a widely accepted practice.

As a result, those who didn't own stretcher rolls tended to claim that you really couldn't fix a circular saw properly with a stretcher roll. Sometimes they got specific and claimed that tension put in with a stretcher roll won't last as long as tension put in with a hammer.

Of course, we have all learned since that stretching the steel a certain amount is what is required and the steel really doesn't care what you stretch it with as long as it is stretched the right amount. We have also learned that since using a stretcher roll for tensioning (stretching) is less physically demanding, it leaves you more time, energy, and willingness to concentrate on getting the leveling done in a much more accurate fashion.

We have also learned along the way that although the stretcher roll was originally designed for just the tensioning part of the leveling and tensioning process, when properly equipped it is an excellent tool for both rough and fine leveling.

A properly put up saw is a properly put up saw: Flat on the log side, acceptable amount of wobble and the right amount of tension in the right location. Regardless of whether the job is done with a hammer, a stretcher roll, or the combination of the two, the finished product should look the same. The two big differences are the efficiency and the lack of hammer marks.

When you level (straighten) a saw with a hammer on an anvil, you hit the bend with your hammer. As that bend goes

down, the metal tends to stretch. That means that you have definitely changed the tension in that area. That is great if in fact you needed more stretch (tension) there. But if the tension was okay to start with, it isn't now. So you have to correct the tension, possibly by stretching an area outside of where you were leveling to compensate for the extra tension in the area that you just finished leveling. Of course, the tensioning process doesn't always go in as evenly as you planned from one side of the saw to the other, so now you have a saw with the right amount of tension, but it still needs a bit of leveling. And as you guessed, leveling that area will again change the tension.

I make it sound impossible to fix a saw with just a hammer, but it's not. Once you become skilled using a hammer and anvil, you figure out ways to work your tensioning and leveling together as much as possible and gradually funnel the saw down into the finished product. So you do some real leveling to start out. Then you do just enough tensioning to counteract the tension change from leveling. Next you do just a little bit of leveling to counteract the side effects of tensioning, and little by little you get the saw to look the way you want it to.

Assuming you have a stretcher roll with some sort of leveling device, and assuming you have a relatively normal saw that just needs to be leveled and tensioned a bit, here is how it works when you use the stretcher roll instead of the hammer and anvil:

You get the tension right in the saw by rolling where you need to. This will often dish the saw a little and depending on your machine, it may or may not be predictable. Not to worry. The beauty of leveling with a stretcher roll is that the process involves simply bending the metal straight as opposed to having to stretch it to get it straight. That is an important distinction.

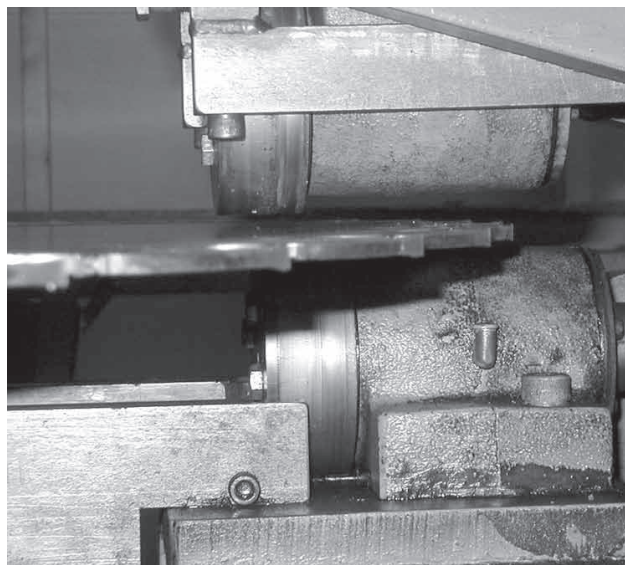
This means that you can spend all day leveling if you need to without ever having to worry about side effects such as changing the tension. Once you get the tension right, you just

go ahead and use the stretcher roll to straighten the saw, and then you are done. Finished. Oh, and did I remember to tell you that there are also no unsightly hammer marks left in the saw? I should say that using a hammer and an anvil doesn't have to leave those awful marks, but some hammermen just don't seem to subscribe to that theory.

Now that using stretcher rolls on circular saws has become a more accepted practice, I sometimes get requests from new customers to use only the stretcher roll on their saw.

After giving them some good old fashioned saw doctor's arrogance by saying that nobody tells me which tools I can use, I then have to explain to them that although in many cases the exclusive use of the stretcher roll happens to be more efficient and less harmful to the saw, I reserve the right to use whatever I deem to be the best method for me and the saw.

First, there are a few occasions when you have to use a hammer because it is in an area where the stretcher roll just won't touch. For example, there are times when you actually have to level the saw right at the bore. The stretcher roll just won't touch that area properly, but a hammer will. There are also a number of cases where it is more efficient to use the hammer than the stretcher roll. For example, let's take a saw that is lacking tension in the body and at the same time is dished, and the bend happens to be just about where you



View of a stretcher roll tensioning a saw.

would want to stretch the saw a little more.

Perfect. Do your leveling, and the desirable side effect will be that the saw also gained tension just where you needed it. That was quicker and easier than tensioning the saw first and then risking even more bend in it as a result of that tensioning, and then leveling with the stretcher roll until finished. Either

way will work, but efficiency can be very satisfying.

Let's also remember that there are a number of saws that come into my shop in such a condition that if all I had to work with was a hammer and an anvil, I wouldn't be able to fix them. I am talking about the ones that had such a horrendous accident, they don't even fit into the crate properly. They are bent so badly that they won't lie flat enough on the anvil to be able to level them properly. And if that incredible bend happens to be right on the collar line, which it often is, stretching the steel in that area of the saw will not only gain a lot of tension in the eye, but if it is severe enough, the hammering process could easily create a thin area at the collar line which would then act like a permanent hinge for your saw to use whenever it sees a little lateral movement. When I fix saws, it is usually not my goal to create something that is only good enough to be called a backup saw.

The stretcher roll equipped with a leveling attachment is a wonderful tool to have in your arsenal. But it is just one of many that you need so that you always have the confidence of having the right tool for each job.

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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