

SAWMILL FORUM

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I have an old antique shingle mill. It doesn't seem to want to feed properly, because I suppose it isn't cutting properly. What do you suppose is the problem?

All circular saws operate on the same principles, as do band saws. Shingle saws have a bit of a different configuration as compared to headrig saws, but they are doing essentially the same job as any rip saw.

Many of my faithful readers already know what I am about to say next. Have you looked at the sharpening? As with any saw, that is always the first place to check. A shingle saw blade is what is referred to as a solid tooth saw, meaning that it is not an inserted tooth saw like most circular head rig saws, and it is not a carbide tipped saw, (a saw with carbide tips silver soldered on). Actually in the old days before the invention of inserted tooth saws, all circular headrig saws were solid tooth saws. And there are still a few in existence today.

The solid tooth saw happens to be a superior saw to the inserted tooth saw when it comes to performance, but it takes a real saw filer to sharpen them and they should be hammered every time they are sharpened. Additionally they get smaller in diameter each time you sharpen them. Essentially it is the same as maintaining a wide band saw without the major kerf savings. That is why almost all circular mills went to the inserted tooth style of saw. The advantages are obvious: ease of sharpening, constant diameter for the life of the saw, and they only need to be hammered after you have done something to create a problem instead of after each sharpening.

Getting back to the shingle saw blade, I would assume that it only gets sharpened occasionally because it's only used occasionally. So chances are it is not being maintained by a certified saw filer like a band saw would be. That means that you are sending it out to a sharpening shop that mostly takes care of small diameter hand-fed saws and buzz saws. It is common in that situation for the person who sharpens the saws to just try to copy all of the existing tooth geometry. The only problem with that approach is: Who knows who sharpened it the time before and whether it was done properly or not?

Unlike other small diameter hand fed saws, concentricity and gullet shape and size become fairly critical because these shingle saws are buried in the cut. These saws don't make dust or chips. Instead they make excelsior. It takes a lot of gullet to properly handle excelsior. And if the shape of the gullet isn't correct, you will have some major problems.

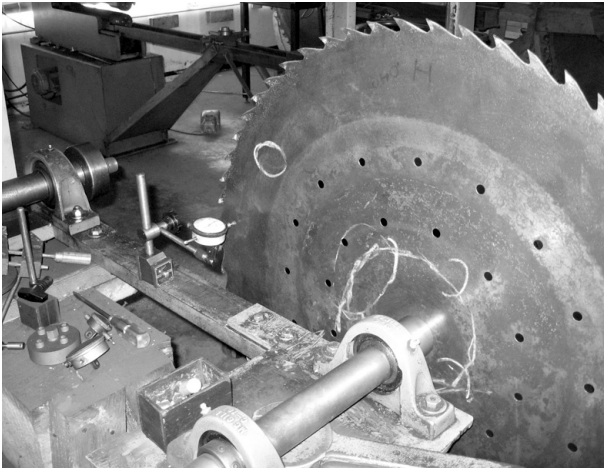
My point is that there is a real good chance that this saw is not sharpened properly. But let's not stop there. Like any saw, shingle mill blades also need to be hammered properly. And just like any headrig saw, they should be flat on the log side, with an acceptable amount of wobble, and the right amount of tension in the right location.

Shingle saws tend to have a lot of taper. It varies, but unlike a head rig saw which is tapered on the board side one or two gauges, these shingle saws tend to have as many as five gauges of taper on the board side. On the other hand, keeping in mind that we are talking about a very old machine, who knows if this blade was original, and if not, was it tapered properly? Even the old ones weren't all tapered the same anyway. Some tapered from the rim to the eye, while others tapered from the rim to the collar line.

Now we get to the other important part of this machine, the collar. Unlike a headrig saw, the shingle mills have a very large collar in relation to the diameter of the saw. Headrig saws use anywhere from 4" to 8" collars on saws that are 48" to 60" diameter. On a shingle mill, it is not uncommon to see a 24" collar on a 36" saw. And these collars are different in that the saws have a lot of countersunk holes in them so that the saw can be screwed directly onto the collar. This gives it a flat face on the log side and then the collar helps to eject the shingle on the shingle (board) side.

The big question is does the shape of the collar match the shape of the saw? Of course we want relief in the collar so that the center of the saw is free to move as a reaction to any lateral movement at the rim.

Just like a headrig saw, the proof of whether there is a problem with the collar is whether tightening the nut on the



Shingle saws are typically solid-tooth designs.

collar moved the saw in either direction. On a shingle mill you have all of those screws to deal with. Still, what you have to do is mount the saw on the collar and check the position of the rim of the saw with a dial indicator. Then tighten all of the screws and recheck the position of the rim. If the rim moved, you have a collar problem. Plain and simple. But the complicated part is what you have to do to correct the collar problem. I should say that before you make that check you should have the saw properly hammered so that it is flat on the log side and all of the taper is naturally on the board side. Once the saw is in the right shape, you might have to have a machinist measure the taper on the board side of the saw and then resurface the collar to match that while including some relief for the center of the saw to move freely.

Additionally the saw should be checked for wobble when it is hammered. Assuming that it leaves the saw doctor with an acceptable amount of wobble, you should be told exactly how much wobble it has. If for some reason it leaves the shop with way too much wobble, there is a good chance that you won't be told how much it wobbles. After you mount the saw on the collar, you should check the wobble again and see how that compares to how much wobble it had with out the collar. If there is a big difference, this would indicate either a problem with the collar, or a problem with the shaft. Either way, it is something that has to be repaired if you want to be able to make a proper shingle.

And just like any other circular saw, it doesn't matter whether you are looking for high production or low production, I would think that you would want to be able to turn out an accurate product.

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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