

# SAWMILL FORUM

CASEY  
CREAMER

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DOCTOR

One of the questions I am asked most is how long a freshly hammered saw should last. Occasionally that question is just asked in passing along with other standard information gathering. But I would say that at least 90 percent of the time when that question is asked, it is in the context of someone starting to doubt the capabilities of their regular sawsmith.

My standard answer is that if the saw is running properly when you first put it on after being hammered, then the length of time it will perform properly is directly related to how you and your mill decide to treat the saw.

There is another answer that goes beyond that standard response, but let me first explore what will make a properly running saw change.

A properly running saw can be affected by three main forces:

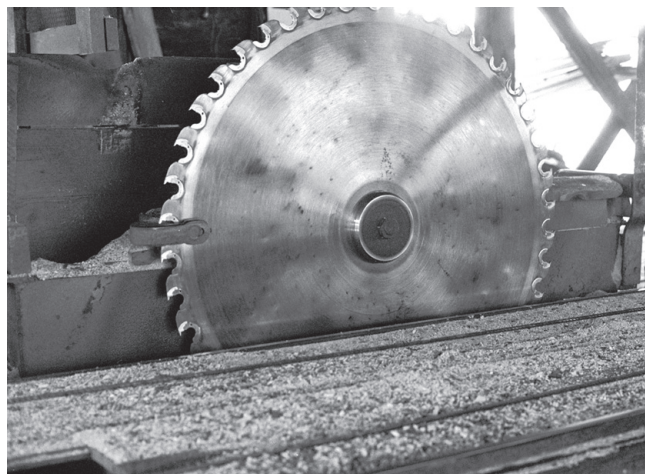
1. Heat.
2. Shock force or resistance.
3. Lateral movement.

Heat can come from:

1. Guides that are too tight or trying to steer the saw with the guides.
2. Warm or hot bearings.
3. Bad collars causing the saw to dish towards board side and exposing log side body to heat.
4. Inaccurate sharpening causing the saw to run out of the log and dish towards the board side and exposing the body to heat.
5. Slow feed causing saw to spill saw dust and then heat.
6. Worn shanks causing saw to spill saw dust and heat.
7. Improper spreader alignment causing board to rub against saw.

Shock force or resistance can come from:

1. Ramming the end of the log too hard when beginning the cut.
2. Dull bits are an important form of resistance.
3. Overfeeding and plugging the gullets.
4. Stalling the saw with or without shearing the pins.



**The life of a hammering job can have more to do with the way the saw is operated than the way it is hammered.**

Lateral movement happens when:

1. You make a set while in the cut.
2. The log moves or rolls a little while in the cut.
3. Too much end play in the mandrel.
4. You have slop in the carriage wheels.
5. You have slop in the head blocks.
6. You have unsquare teeth causing the saw to pull to one side.
7. The saw dodges a knot.

Of course that list isn't complete, but that should give you a good idea of what causes a good saw to start misbehaving.

Now here is one very important piece to the puzzle: When I am asked that particular question, I can usually tell if it's being asked because the person is wondering whether their saw doctor happens to be doing the job properly. Like I said earlier, that is the case most of the time, so it isn't very hard to tell.

I always start out asking whether the saw ran properly when they first took it out of the crate. Of course if they say no, then we have to figure out whether it is the saw or the mill, etc. Usually they say that the saw ran fine when they took it out of the crate, but then in a few hours or a few days it

started going bad.

The easy answer is that if it ran properly for as few hours or a few days then something must have been done to change that. That is the easy answer—assuming that I have gotten truly accurate information. The trouble is that sometimes what they perceive as a saw that is running okay when they put it on is really a saw that may not be quite right, but it is close enough that it seems okay to the sawyer, when in reality, it isn't.

If the saw wobbles a lot from the start, then any sawyer will recognize that as a bad sign. Let's remember what a properly hammered saw looks like.

1. Flat on the log side.
2. Acceptable amount of wobble.
3. Right amount of tension in the right location.

The flatness on the log side can be checked by you if you happen to have a 48" saw maker's straight edge, not a carpenter's level. And if you are checking, you should check it before you tighten

the nut on the collars and after you tighten that nut to be sure that your collars aren't dishing the saw.

Acceptable wobble is defined by me as plus or minus fifteen thousandths of an inch. The reality is that even without measuring, any sawyer can tell you when a cold saw is wobbling too much. (I say cold because once a saw is warm or hot it may develop a wobble for other reasons).

The one thing that is the hardest for a sawyer to measure is the amount and location of the tension in the saw. One very crude way is to stand the saw on the ground and give it a shake. If it shakes drastically different from what you are used to having success with, it is a safe bet that it has a tension problem, assuming the saw is cold, of course. But that really doesn't get at the nuances of having the right amount of tension in the right location in the saw.

Here is a scenario that almost seems to contradict the statement that if it ran okay out of the crate, anything after that is your fault.

Imagine a saw that is very flat on the log side (as it should be) with a wobble that is well within running tolerance, but it has either not enough tension or the tension is not exactly placed correctly. In this case the saw would appear to run properly in that it wouldn't wobble when brought up to speed. So the sawyer would be lulled into thinking that the saw is okay. Then when the sawyer tries to saw with it, he/she may or may not notice that the saw just won't quite take as much feed as it should. The sawyer may fail to notice this problem because he or she might be used to all of the saws running this way. Given that each log is different from the last one and that each cut is a little different, it may also be hard for even the most experienced sawyer to notice a subtle difference in the amount of feed a saw will take in a given depth of cut.

What you have in this scenario is a saw that the sawyer claims was running fine when it was first put on, but after a short period of time it started to act up. Given its lack of tension, this saw will continue to try to dodge knots and do anything but saw a straight line. In that process it will just gradually get worse until it gets to the point that the sawyer starts to get annoyed at how much this particular saw needs to be babied. Then the sawyer asks the boss to get the saw hammered and the boss asks, "Didn't we just have that done a couple of weeks ago?" That is when I get the question about how long a saw should last—from one of my competitors' customers.

That is of course only one scenario. There are many other possibilities as to how a saw could be hammered almost properly, but just enough wrong to not last very long. And of course there will always be many chances for a sawmill to take a perfectly good saw and ruin it within the first day.

**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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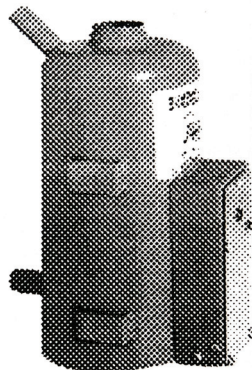


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