

SAWMILL FORUM

CASEY
CREAMER

SAW
DOCTOR



Attached is a picture [facing page] of a saw that one of my customers brought in to me to be hammered. Why does the collar line look so weird on that saw and what does it tell you? He is the only one of my customers with saws that look like that.

The first thing it tells me is that you have a customer who needs you to educate him a bit. What the picture tells me is that your customer is spraying some WD-40 on the saw when it gets hot, in hopes of cooling it off so that he can keep sawing.

That is not a good idea. The worst case scenario would be that the saw happens to get so hot that it starts to change color. In that case, rapidly cooling it poses a risk of cracking. Most likely the saw isn't quite that hot.

Every sawyer soon realizes that heat is the saw's biggest enemy. Knowing that heat needs to be avoided at all costs, many sawyers come to the natural conclusion that if the saw does get hot, it is best to get it cooled down as quickly as possible. While it is true that the quicker it cools down, the sooner they can get back to making lumber (or should I say ruining lumber), the metal itself really doesn't appreciate rapid temperature changes.

Here is what is happening in most of these cases:

The saw wasn't sharpened properly. Most likely it was either sharpened out of square and high to the board side, or many of the logs side corners are missing because it wasn't sharpened enough.

As the saw starts the cut, the teeth will pull it towards the board side, otherwise known as "out of the cut," or "running out." When this happens, the saw bends and exposes its body to the log. In other words, the log is now rubbing the body of the saw. This creates heat and makes the log side of the saw hotter than the board side.

As you know, metal expands when it is heated. Now imagine

that the log side of the saw is expanding more than the board side because it is hotter. If the log side expands or stretches more than the board side, the saw will dish towards the board side. Of course, the saw was already dishing towards the board side because the teeth were pulling it that way. That amount of dish caused the saw to rub the log which created the heat that dished it even more towards the board side.

All of that is bad enough, but then the sawyer gets out of the booth and sprays a little WD-40 on the board side of the saw to cool it. Of course that cools (shrinks) the board side quicker than the log side so that it just serves to dish the saw that much farther towards the board side.

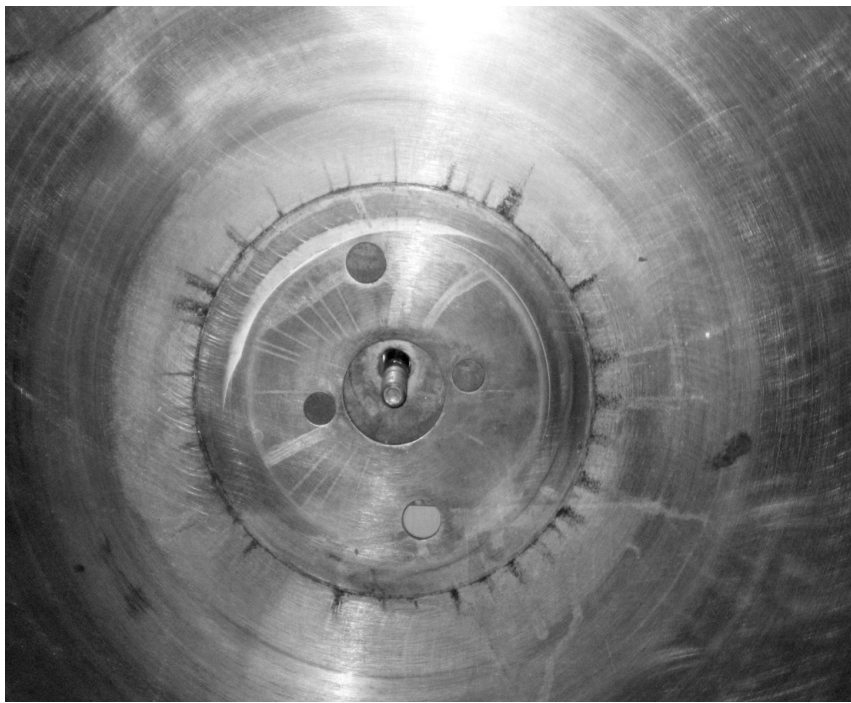
The more this vicious circle goes on, the more lumber you ruin and the sooner that saw will need the attention of a saw doctor.

Ideally, the saw should have been sharpened properly from the start, but of course, we are not living in an ideal world.

As soon as the sawyer running the saw in the photograph noticed the saw heating and mis-cutting (running out of the log) he should have shut it down and spent a few unproductive moments trying to figure out what was wrong. I say a few "unproductive" moments because I doubt that the sawyer in question is a regular reader of this column. If he is, he would know that the absolute first thing to check is the teeth. At that point, if he bothered to put his glasses on and really inspect the teeth carefully, he would have noticed the problem right away and by the time he got the teeth looking the way they should with a grinder, the saw would have cooled naturally on its own.

And most likely, the saw that got a bit hot and was shut down soon and allowed to cool naturally, would now saw properly and not need to see the saw doctor. This would be particularly likely if it was properly sharpened in the process.

As you can easily see, that small investment of a little down time upfront paid off in more production and fewer miscuts.



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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