



BY CASEY CREAMER

Just wondering if you have a recommended torque value on the saw collar. The only answer I can get from anyone is “Just tighten her up and wrap the wrench a few times with a hammer.” I’m a bit more precise than that, but if that is the only answer I can get, I’ll just give her a try.

**T**he tension part of saw hammering is possibly the least understood concept that we deal with. I readily admit that once I learned how to hammer saws, it still took me quite a while to get an adequate handle on that particular subject. Just the use of the word tension can be very confusing for people. When people are feeling tense, they tend to stiffen up and can become less flexible. That is not how it works with saws or metal in general.

Unfortunately I don’t have the precise answer that you seek, although I assume a real mechanical engineer can easily come up with a real answer if you provide all of the dimensions needed. They would include saw diameter, shaft diameter, collar thickness and diameter, and inside diameter of the nut.

I can tell you that most sawyers tend to overtighten the mandrel nut because they assume that overtightening is better than undertightening.

The biggest variable is the length of the wrench you are using. If you have a two or three foot wrench, you really just need to tighten just a little past snug. Do NOT hit a relatively long wrench with a hammer. If you have a shorter wrench, you should try to tighten just past snug by hand and if you are not sure, just give it one easy hammer blow with a moderate size hammer.

When I started hammering saws, there were a lot of collars in use that were four and a half to five inches in diameter. Nowadays, you rarely see a collar that is less than six inches, and most of the collars I see are eight inches in diameter. That certainly creates a better clamping ratio on a 56” saw than a 4.5” collar would. But it is a lot easier to distort an 8” collar by overtightening the nut than it

would be to distort a smaller collar. Which is easier to break in half, a new full length pencil or one that is worn down to two inches?

I used to have a customer in the hills of North Carolina who always used a rather large torque wrench on his mandrel nut. I don’t remember what torque setting he was using. But after watching him make a saw change, I can safely tell you that at least he overtightened the nut the exact same amount each time. And overtightened it was.

What’s the harm in overtightening? Especially now that most mills are running larger collars, there is plenty of risk that overtightening the nut will distort the collar to the point where it will no longer have enough taper in it. That is why it is important that, when you check your collars by going from hand tight to wrench tight and measuring the movement of the rim of the saw with a dial indicator, you tighten the nut at about the same amount that you would tighten it regularly. That way, if the tightening is distorting the loose collar, you will see the result of that problem in the amount of movement at the rim of the saw.

You certainly don’t want an undertightened nut for obvious reasons. On the other hand, as long as your thread goes in the right direction, the nut will tend to self-tighten to some extent anyway. I say to some extent because a loose nut is still going to be a loose nut and a serious hazard. By the way, right-handed mills should have regular right-handed thread while left-handed mills should have left-handed thread on the mandrel to make sure that you do indeed have that self-tightening situation.

And don’t forget that when you change saws, you should always turn

the saw back against the pins just before you tighten the nut. That way when you hit the front end of the first log, the saw doesn’t get a running start and shear those pins. And once you shear the pins, it is definitely time to have your collars resurfaced.

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