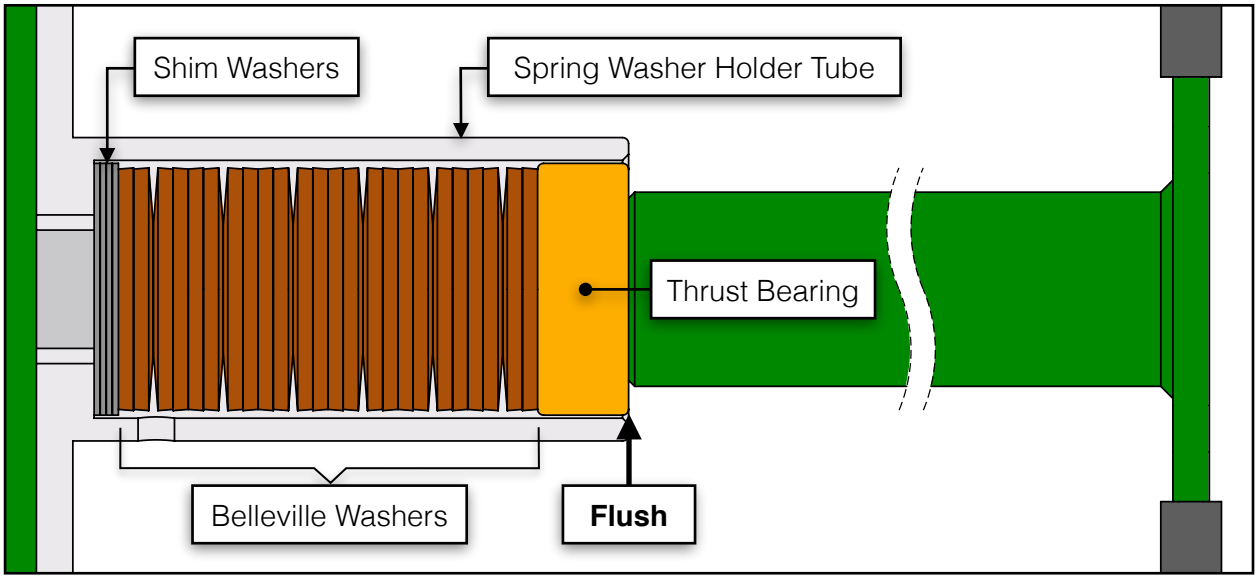
BLADE TENSION GUIDE

OVERVIEW

The 2020 and newer Woodland Mills sawmills use an ACME threaded rod for blade tensioning mounted within an assembled stack of Belleville washers for blade cushioning. This combined assembly allows for predictable and repeatable tensioning throughout all temperature ranges with minimal wear and maintenance.

The assembly has built-in tuning capability for operators that use the flush bearing method as a visual indicator for achieving the recommended blade tension. Also, tuning for wear to ensure proper tension is consistently achieved for years to come.



Below is a table comparing the positive and negative effects of low and high blade tension.

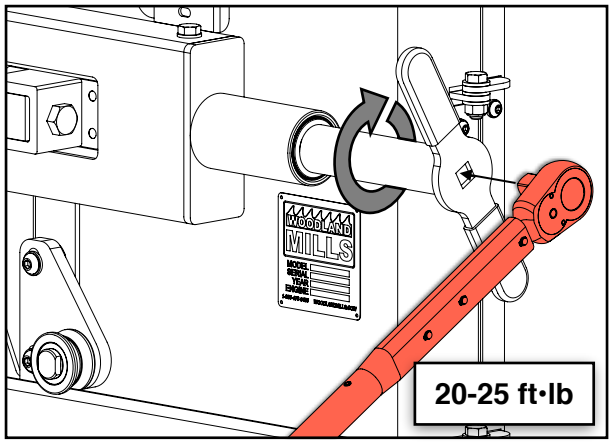
Low Tension [15→19 ft·lb] 2→2-½ Turns	Recommended Tension [20→25 ft·lb] 2-½→3 Turns	High Tension [26→30+ ft·lb] 3→3-½+ Turns
• Unpredictable tracking	• Holds tracking properly	• Accelerated belt wear
• Wavy cuts	• Cuts accurately. Optimal blade life	• Unpredictable tracking
• Blades rely more on guides	• Optimal bearing life	• Overheated blades. Blade breakage
	• Optimal belt life	• Accelerated bearing wear

TENSIONING METHODS

With the recommended tension range for milling in mind, the operator can decide how to tension the sawmill. Choose one of the three methods from below:

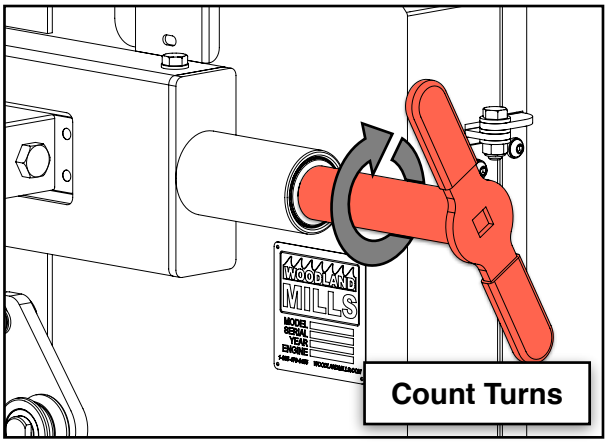
1. **Torque Wrench Method**: Use a torque wrench to tension the sawmill each time it is used. This ensures perfect tension and is easy to adjust within the recommended tension range.

   This method accounts for wear and settlement without future calibration.



2. **Count Turns Method**: Spin the tension handle to remove slack in the blade and snug the handle up to the thrust bearing. From this point, 2-½ to 3 full turns will put the blade tension within the recommended range.

   This method accounts for wear and settlement without any future calibration.



3. **Flush Bearing Method**: This method requires an initial calibration using Method 1 or 2 to set the tension within the recommended range.
   - If the bearing is *flush* with the tube under recommended tension, no shim washers need to be removed or added.
   - If the bearing is *proud* of the tube under recommended tension, remove shim washers.
   - If the bearing is *beyond* the tube under recommended tension, add shim washers.
   - Retune approx. every 100 hours.