Get All You Can!

If you think about what wide bands endure, it's a bit like the Concorde—the retired Super Sonic Transport airplane. The Concorde became several inches shorter in length and several inches larger in diameter every time it was in flight and then it would return to it's original dimensions when it came down! The fuel tanks on the SR-71 Blackbird behaved similarly. They leaked like a sieve when the airplane was on the ground only to seal off after it reached it's speed and altitude somewhere above mach 1, headed for the near reaches of space!

OK, maybe these analogies are a bit over the top. But name another device in the mill we expect to endure the internal structural movement of a wide band? It must flex over the wheels under huge strain and be ductile enough for us to cold form it every few hours. (Benchwork and swagging and shaping are all cold forming.) We expect its useful life to be several hundred hours, and ultimately, this is all peripheral to the real work it does in the cut!

In some important ways, new wide bands are in the worst shape they'll ever be in. But given a little extra special attention during break-in, they will pay off handsomely. If you don't break-in properly, then no problem. Like the chip ad says, "don't worry, we'll make more"!

We very much appreciate your purchase of our bands. We hope you find these suggestions helpful in getting the longest life and best performance from your Simonds saws. Our saw-makers are very proud of their craft and their product. If you have comments or suggestions, we welcome them. Please let us know at 231/527-2407 or rbarratt@simondsint.com.

(This information is excerpted from an article published in the August 2009 issue of "Hardwood Matters" the monthly magazine from the National Hardwood Lumber Association.)

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Large Circular Saws

We produce large diameter cut off saws and inserted tooth wood saws at our plant in Big Rapids, Michigan. The teeth for them are manufactured at our plant in Fitchburg, Massachusetts.

Small Circular Saws

Our small saw line is now made in the Portland, Oregon, plant and much of the equipment used to make them was built right at Armstrong.

Chipper & Counter Knives

Our chipper, counter, lathe, OSB, and brush chipper knives are all made in our Big Rapids, Michigan, facility.

Armstrong Machinery

Armstrong brand machinery has been made in Portland, Oregon, since the company was founded. The Linear Slide is a new innovation that's taking the market by storm!

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New Saw Handling For

Maximum Life & Superior Performance!

New Simonds Saws:

Care & Feeding

Breaking-In Your New Wide Bands

Breaking in a wide band is absolutely critical to the performance of the saw throughout its working life. Get it right and the saw can last hundreds of working hours, barring catastrophe, and perform well from beginning to end. If not broken-in properly, you'll do immediate damage to it, shortening it's life and diminishing how well it works from the first day to the last.

Accumulated Stress

When a new wide band first arrives in the mill, it has been hot rolled to near net shape, heat treated, and finish ground, all before it leaves the steel mill.

Laser Cutting Saw Teeth.

These operations create individual internal stresses in the raw material. Next, the saw manufacturer puts in the teeth and the butt weld, then proceeds to stretch different parts of the blade to different lengths, getting as close as possible to your specs for back tension and tires. Each of these operations adds internal stresses in addition to what's already present. In fact, it adds those stresses at a radically faster pace than the saw will ever face again.

A careful saw-maker uses many, fairly light tensioning rolls to move the steel gently over the entire width of the saw. This process helps to stretch all of the steel uniformly, eliminating strips between the tensioning tracks that have not been stretched and would ultimately create problems. These spots that are not stretched like the steel around them, called "fast" spots, will draw tight when the saw is under load and carry too much strain. Even with the most carefully made saws, these tight places will exist. Only with several successive bench jobs will these spots become visible and can then be remedied. If made too quickly and carelessly with relatively few heavy rolls a saw may appear to have reasonable tension, but in fact, these unstretched fast spots are dominant.

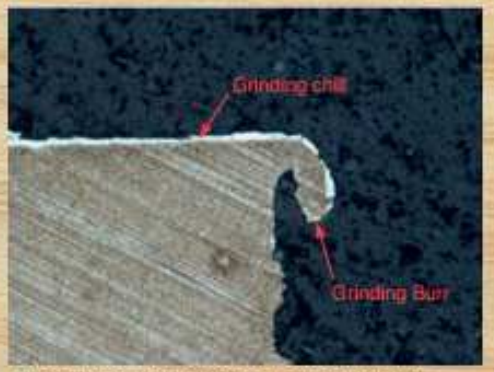
10' Mill in British Columbia.

Every time a saw runs, the flexing and vibration on the bandmill will work to expose and relieve any stresses that are in the steel. In a new saw, this includes both these tight spots from the initial benchwork and the residual stresses from the steel manufacture. Run the saw briefly (an hour is great, two is a compromise) on its first few runs, then let it rest. The movement that the mill creates in the steel will equalize internal stress. Now work it up carefully on the bench, identifying and eliminating the "new" fast spots and run it again for a short run. Repeat this a couple times, and you'll have a saw with genuinely uniform, even tension, relatively stress free, and easy to maintain. Make shortcuts here and you play a losing game of catch-up for the rest of the (shortened) life of the saw! Penny-wise, pound-foolish.

Fitting

Another important (and patient) part of the break-in is getting the factory ground saw to match your tooth shape exactly. Factories work hard to send in saws with a tooth shape that is a close match, but it's never identical to what your grinder and grinding wheel shape produce. Generally, saws should be ground in completely and carefully to your profile before they're run at all. It's vital to do this without creating excess heat and to grind the entire profile without any intermittent grind in the bottom of the gullet. If the grind has stops and starts anywhere in the deep part of the gullet, cracks are certain and will start at those transitions.

Grind the saws fully, wiping the burr off with a sharp wood chisel. Then, before you run them the first time, dress the bottom of each gullet with a round hand file. If any hard spots remain from the manufacturing process or from the initial grinding, the file will chatter over them. You can't miss these spots with a file and you can't find them with an air grinder (or even the much beloved Proctor Roll). This little extra attention on new saws is a great investment and will pay big dividends.



Microphotograph of bandsaw steel showing grinding chill and burr from sharpening.