

Spin Grinding — So What!

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“You want more money for shop tools? Look, we don’t want a fancy shop, we want a good-looking course. Buy another mower and get to work.” Or how about this one from your mechanic: “So why the heck do I have to spin grind when I have always single blade ground my reels and my turf looks just fine...?”

I am sure each of you has run into these kinds of questions, or at least something similar from your greens committee members, golfers or employees. There have been major changes in mowing equipment and the expectations of how a course should be maintained. This puts pressures on the Superintendents and Equipment Managers to make sure that their equipment is performing optimally. Spin grinding is becoming more of a necessity than you may think.

To realize the significance of spin grinding, we must remind ourselves of the basic principles that let reel mowers produce a superior cut. When sharpened blades and bed knife are properly aligned, the shearing action creates a clean, even quality cut.

When manufactured, mower reels are ground to be perfect cylinders. The diameter at all points is equal. The bed knife is mounted so it is perfectly parallel to the blade surface across the full width of the mower. When the blades and knife are properly aligned, the best cut is obtained.

Usually two things happen to cause a reel to lose its shape and become tapered.

First, most cutting units require that field adjustments be made to keep reel and bed knife in the best cutting proximity. Excessive adjustment on one side causes the reel blades on that side to wear faster. Repetition of the over adjustment actually compounds the problem. The reel loses its cylindrical shape and becomes tapered.

The second reason reels lose their cylindrical shape is

traced to the very nature of the reels themselves. The natural helix, or twist, in the reel blades causes the “lead in” end of the reel to wear faster. The diameter at the end becomes smaller. Each time you adjust the mower, the accelerated wear continues and the “lead in” diameter becomes even smaller.

If you use the simple “touch method” of alignment for sharpening, where you contact each of the reels with the grinding wheel, the reel’s conical or tapered condition is not corrected and the reel is not restored to a true cylinder. The difference between the two ends continues to increase, and eventually the taper exceeds the mower’s range of adjustment. (See Fig. 1)

Spin grinding removes the conical shape and restores the reel back to a sharp cylindrical shape with all blade cutting edges ground to the same distance from the reel shaft. (See Fig. 2)

Technology is changing rapidly as evidenced by the influx of new high tech mowers, lower and lower heights of cut and the requirement for increased green speeds. That is why it is time to consider the use of higher performance sharpening equipment to help you get and maintain optimum performance out of your mowing equipment.

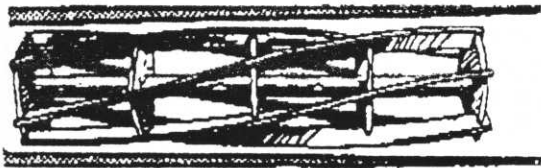


Figure 1

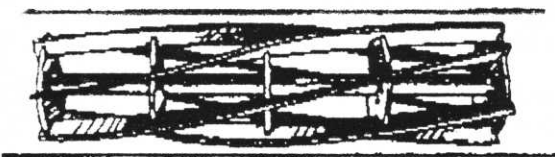


Figure 2

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