

Keeping Reels Sharp

by Monty Montague
National Mower & Turfco, Inc.

Reel mowers are high-precision machines that provide top-quality cutting. To deliver such cutting performance, they employ a combination of a reel, often spinning between 600 and 2,000 rpm., and a bedknife.

Because those two elements combine to do the cutting, they should be adjusted precisely. There should be little or no contact between the reel and the bedknife, and the leading edges of both should be squared off — some manufacturers even believe there should be a “reverse angle,” and those vary from five to 15 degrees.

There are several ways to sharpen reels. The most commonly used is backlapping, which is actually a simple, inexpensive honing procedure that should be done after approximately 40 hours of cutting. Backlapping involves spinning the reels in reverse after applying (brushing) a special compound, and either backing the reel down to the bedknife or the bedknife to the reel, depending on the particular mower. The pressure between the reel and bedknife, combined with the sharpening compound acting as “liquid sandpaper” actually sharpens the reel blades. When the “grinding sound” stops, the backlapping process is usually complete.

Sharpening compounds come in a number of grits, from a very coarse 50 grit to a very fine 220 grit. Most people tend to use them in the 80 to 120 grit range.

There are two basic ways of spinning reels backward for backlapping. For reel mowers that are not hydraulically driven, there are electric backlappers. They cost about \$400 and can be hooked directly to the mower. Hydraulically driven reels, on the other hand, will probably have a backlapping switch on them.

Sometimes backlapping isn't enough. The next step is grinding and there are several ways to grind mower reels. The first is a spin grinder. Spin grinders range in cost from \$2,600 to \$20,000, so many sports turf managers will actually send their reels out for grinding. But whether you send your reels out for grinding or do it in house, the most important thing you do *before* is to check the reel for bearing wear and adjust end play. A worn reel, particularly an unevenly worn reel, could be the sign of an improper adjustment or even a worn bearing that needs replacement. If that same reel was sent out for grinding without the mechanical problem being corrected first, the reel and bedknife could “slap” during grinding and create a damaged or an unevenly sharpened reel. Solve any and all mechanical problems with your reels before you send them out for grinding — check your owner's manual for specific adjustment instructions.

Spin grinding is “flat-edged” grinding and is good until you have no relief left on your reel blade. Relief grinding creates an angle on the trailing edge of your blade. All blades come from their manufacturers with relief, and it reduces the pulling and tearing of grass when reels get dull. Relief also speeds up the backlapping of resharpener process. Some manufacturers believe it extends the life of the bedknife.

One of the most common tests for reel sharpness after backlapping, grinding, or relief grinding involves placing two pieces of newspaper between the reel and bedknife. If they cut the

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*"Where Meadow Goes,
the Water Flows"*

(Keeping the Reels Sharp continued)

first piece of paper and bend the second, then the mower is probably ready for action. It's important to repeat this test, not just in the center of the mower but at both ends. Improper adjustment or a worn bearing can lead to uneven sharpening and leave you with a conical reel.

How often you backlap, grind or relief your reels will, in large part, be determined by your specific situation. Factors include grass type, cutting frequency and height, topdressing frequency, obstacles and more — it all depends on use. If your reel mower is still cutting beautifully at the end of the season, there's not sense in grinding it. Again, the most crucial thing is to consistently check bearing wear or end play wear, and correct it immediately. If you make adjustments and still get end play, it's probably time to change the bearing — before you use any reel sharpening method.

Credit: **Hole Notes**, 7/94



Super-N-Site

by Tony Rzadzki, C.G.C.S.
Superintendent, Cantigny Golf

Our final MAGCS golf event meeting will be held October 10th at the resort at Oakbrook Hills. This event will be a two man scramble and Kerry promises to set the course to play **hard!** I said, "Kerry, what if Braunsky and Ray Schei are partners ... we'll be handing out prizes at midnight!" Kerry quickly calmed me down and explained that the Nugent designed, nine year old course was designed to 'play easy'. The owners, the Dial Soap company, wanted a resort community that was eye appealing, fun to play, and not overly difficult. Par at Oakbrook is 70 and plays to 6400 yards at the tips. Kerry told me that there is no water on the right on any holes, but plenty of landscape beds. So Eddie, you'll probably break a 'hundo' but bring along some mums to transplant later.

Kerry has a B.A. in Education from Illinois State and an Associates Degree in Turfgrass Management from Danville Community College. Kerry is also involved in politics, as you all know the man behind the scenes on the board of the MAGCS. Kerry's active interest in the Midwest Association has helped us progress and grow to some 600 members. Kerry's other interests include weekend softball, golf, and is a self-proclaimed, bonafide sports nut.

Oakbrook has invested some money this year (\$500K) in landscaping, cartpaths, and brick curbing at tees and greens. I'm sure that we will see some neat landscaping, play some fun golf, and enjoy a nice fall day. Don't worry, Kerry, I'll tell Eddie to bring some replacement bricks for your curbs too.

Proper Pesticide Storage

by Cooperative Extension Service

With winter approaching, we need to remind ourselves of a few basic principles about proper pesticide storage.

Regardless of the size of your operation or the volume of materials you use, pesticides should be stored in a separate building, room, or enclosure. The storage area should be kept dry, reasonably cool, and out of direct sunlight. An exhaust fan should be used for proper ventilation to help reduce the temperature and build up of toxic fumes. Be sure to locate the exhaust fan where it will not damage plants or harm humans. Some pesticides have special storage requirements and require protection against freezing or extreme heat. As a general rule, most pesticides will begin to deteriorate at temperatures below 40°F. and above 90°F. Be sure to read the label for proper storage requirements. Pesticide bags, cartons and boxes should be stored off the floor on shelves or on pallets to avoid moisture and deterioration of the packaging. The storage area should be securely locked when not in use and warning signs with "**Danger — Pesticides, Keep Out**" should be posted on the door and other appropriate areas. Be sure not to store glass and metal pesticide containers near a heat source such as steam pipes or in direct sunlight. Heating of the container may result in expansion of the liquid contents and lead to an explosion. If you are using several different types of pesticides (i.e., insecticides, herbicides, and fungicides), be sure to keep each pesticide type in separate areas to avoid confusion and inadvertent misuse. Keep a current inventory of your materials as to purchase date, quantity, and condition of the container, and use up pesticides that may be reaching the limits of their shelf life storage. By doing this, you will reduce the volume of unused chemicals preventing a large disposal problem and avoid the mistake of spraying with a pesticide that has lost its pest controlling ability. **Under no circumstances should a pesticide be stored in a food or drink container!** When examining chemicals for evidence of deterioration, look for these warning signs:

Emulsifiable Concentrates: Milky coloration does not occur with the addition of water, sludge is present or any separation of components is evident in the container.

Oil Sprays: Milky coloration does not occur with the addition of water.

Dusts, Granules and Wettable Powders: Excessive lumping.

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