

# EXPLORING EQUIPMENT

## Reel Mower Maintenance Keeps Turf A Cut Above

By Dan Kilgas

It's true what they say: Behind every well-groomed lawn, stadium, or fairway is a well-maintained reel mower. A primed reel mower, with sharp cutting edges and agile rollers, is essential for delivering precision cutting and mowing efficiency.

Consistent maintenance is critical to reel mower performance and longevity. Timing is equally important. The following plan outlines recommendations, courtesy of Kubota, that match timing to maintenance.

### Maintenance Interval Chart

**Daily:** Check for loose fittings, leaks, and damage to components. Check that all safety shields are in place and are in operating condition. Check hydraulic oil level. Grease grooved rollers. Grease mini-rollers and stems.

**Break-in Period:** Adjust reel bearings after first 10 hours of use. Change hydraulic filter after first 50 hours of operation.

**50 Hours/Weekly:** Grease linkage and pivot on tool bar and reel bearings on cutting units. Grease front-roller adjustment stems.

**100 Hours:** Backlap reels as required. Check reel bearing adjustment. Adjust if required, then grease.

**250 Hours:** Change hydraulic oil filter.

**500 Hours/Yearly:** Replace hydraulic oil. Clean strainer in hydraulic tank. Apply lubricant to bedknife adjustment sleeve. Apply light oil to bedknife shoe stud and bushing. Sharpen reels and bedknives.

### Maintenance And Lubrication

**Reel Maintenance.** Check reel-bearing endplay in each frame weekly. Adjust with collar on the end of the reel each time before backlapping—a procedure that involves running the reels in reverse

with a special gritty compound to obtain smooth, sharp surfaces on the reel blade and bedknife. Backlapping ensures a nice, smooth cutting effect across the grass, much like sharp scissors to paper.

In order to maintain sharp edges on both the reel and bedknife, Kubota recommends backlapping units at least once a month, or every 100 hours of use. You can do this yourself, following instructions found in your equipment operator's manual. If conditions are dry or dusty, or if you mow ground that has a lot of obstacles, more frequent backlapping may be required.

The average time for backlapping a three-gang unit is one hour. However, the less often you backlap the reels, the longer it will take when you actually get to it. For example, if you backlap every three months, or 300 hours, the average time for backlapping is three to four hours.

Grinding reels and bedknives should be done when the bedknife is worn more

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than 1/16-inch, or once a year. Rollers should be checked for oil leaks or endplay weekly, and repaired as necessary. For specific reel and bedknife sharpening instructions, refer to your owner's manual.

**Lift Circuit.** Complete lubrication of all indicated linkage is required every 50 hours, or once weekly.

**Hydraulic System.** Change the oil filter every 250 hours. The hydraulic fluid in the reel drive circuit must be changed every 500 hours, or once a year.

It is recommended that, at the end of the operating season, oil be drained from the reservoir tank by removing the drain plug. After draining, insert the drain plug and fill the reservoir with approximately five gallons of KTC hydraulic oil fluid. Back off bedknife to reel adjustment. Start tractor engine and run at idle speed, engage the PTO and move the reel control valve to the operating position. Allow the oil to circulate for five minutes. Stop the tractor engine, open the drain plug, and drain the fluid from the tank. Remove and replace the filter element. Remove and clean suction strainer. (Refer to your parts breakdown.) Replace drain plug and fill with appropriate hydraulic oil.

After refilling, start the tractor and run the fluid through the circuit for 10 to 15 minutes. When necessary, add fluid to the tank. Turn off the tractor when filling and check the level in the sight gauge. The oil level should be present in the bottom level of the sight gauge.

Never allow the level to drop out of the sight gauge—pump and motor damage may occur. And do not overfill!

**Reel Head.** Always remember: Before lubricating, disengage the PTO. Place the transmission in neutral, apply the parking brake, shut off the engine, remove the key, and be sure the rotation of the reel blades is stopped before leaving the operator's seat.

Periodically check rollers for signs of oil leakage. If an oil leak does occur, remove the end cap, drain the roller and check the roller shaft for grooves. If damaged, replace the shaft and seal. After installing the seal, add one quart of the appropriate weight engine oil. (Refer to your owner's manual.)

Be absolutely sure to clean grease fittings *before* lubrication. Always use SAE multi-purpose grease. Also, do not use a high-pressure grease pump—seal damage may occur. (Note: Adjust reel endplay prior to greasing.)

Apply lubricant to reel bearings weekly, using a hand-pressure gun. Rotate reels by hand while greasing until the lubricant seeps from the seals and motor-adapter relief holes.

Apply grease to the adjusting stem weekly. Apply grease to the mini-roller adjusting stem daily.

Grease mini-rollers or grooved rollers on each day of mowing.

If necessary, apply lubricant grease to the bedknife adjustment sleeve twice yearly, using optional grease fitting to force lubricant throughout the sleeve.

Occasionally apply light oil to the shoe mounting bushing and the mounting stud.

By following these reel mower maintenance tips and others found in your operator's manual, you'll ensure the same winning performance that the unit delivered when new. The result will be top notch cutting quality that meets the highest expectations. □

*Editor's note: Dan Kilgas is service training manager for Kubota Tractor Corporation.*

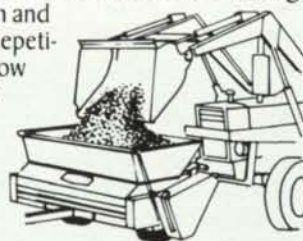
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