

INDUSTRY NOTES from Page 9

MTI Distribution Company has announced new high performance enhancement for its Reelmaster 216 triplex mower. It now features 3 wheel drive and 11 blade cutting units in addition to its lightweight design and wide tires.

The 3 wheel drive feature allows for greater traction and speed of mowing, and a 3 wheel drive kit is available for earlier models.

"Our customers asked for enhanced hill climbing and more maneuverability," said Bill Koenig, Marketing Manager of Toro's Commercial Division. "The Reelmaster 216 has the power for hill climbing and superior quality of cut. The machine is balanced, with the engine positioned over the front traction wheels, allowing for responsive handling when trimming or cross-cutting."

In addition, the Reelmaster 216 allows for the choice of 5, 8 or 11 bladed reels, giving it increased flexibility as well as maximum quality of cut.

The weight of each cutting unit is balanced so they follow ground contours evenly at any speed.

Grass collection has been simplified on the 216, so the

operator does not need to attach additional parts to change from front collection to rear dispersion. The procedure is completed with a shield adjustment.

Improved ease of operation is another customer request built in the Reelmaster 216. One lever controls the cutting reels, and forward, reverse and braking action are all controlled by a foot pedal.

The 216's lightweight design and wide tires are a departure from other mowers and address another customer concern by reducing compaction.

Contact MTI for more information.

SILENT EMPLOYEE from Page 3

freezing or if you would like the peace of mind that fire could possibly be averted, or maybe break-ins are contributing to your lack of sleep as well as work worries, I would recommend installing a security system for your establishment. Just make sure you are the one getting up at night to answer the alarm and not your wife.

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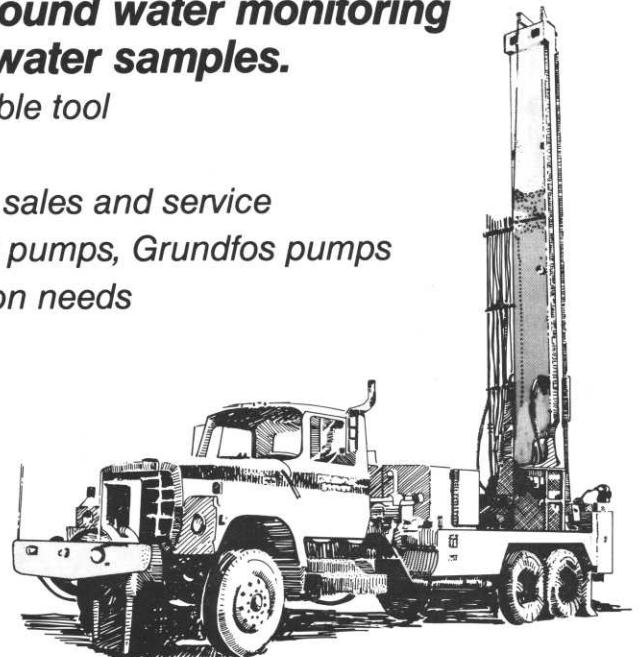
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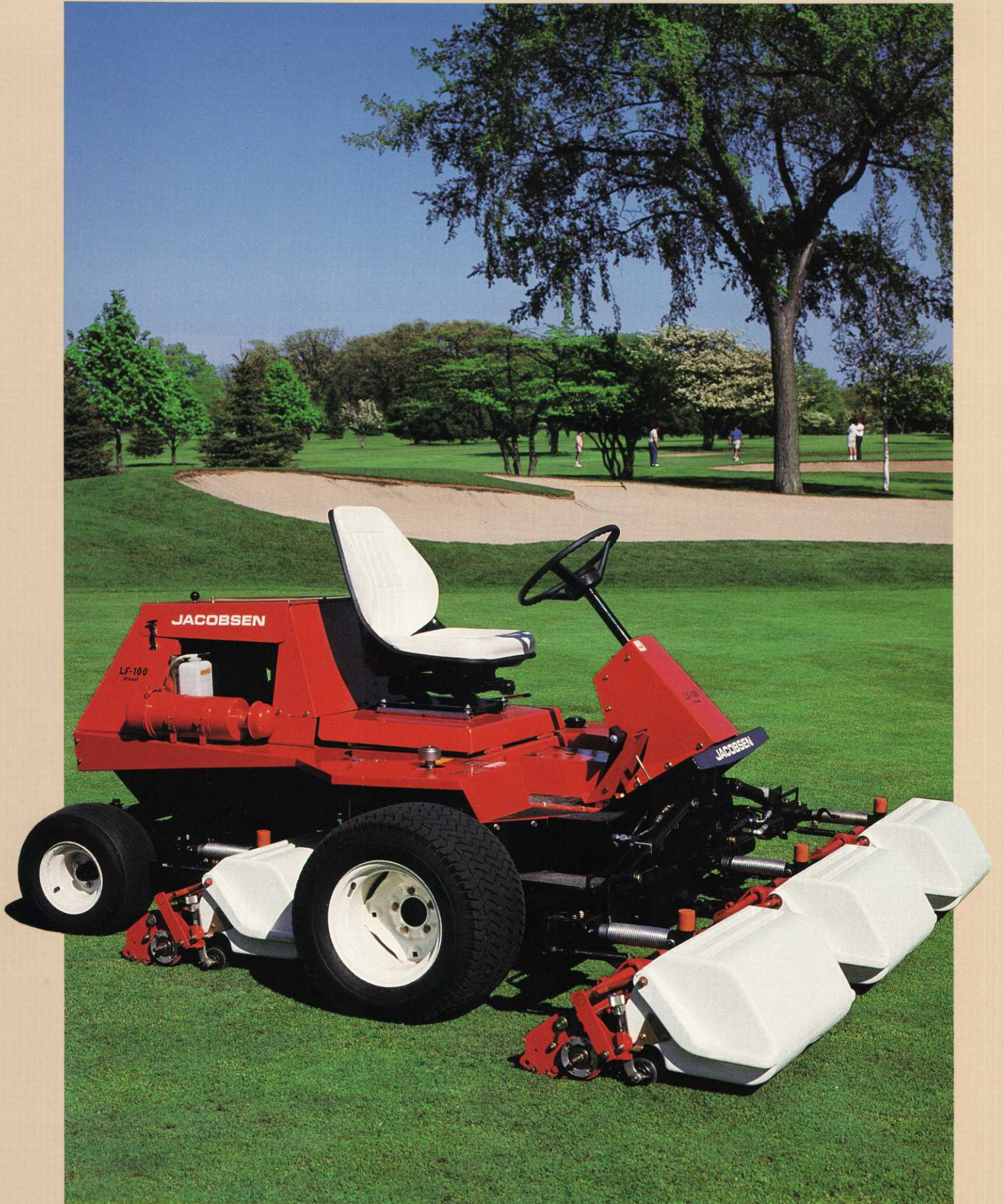
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- Extremely light footprint
- High productivity — cuts up to 5½ acres per hour
- Easy access to all reel units





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Up-front reels make top performance easier.

To make the operator as productive as the equipment, Jacobsen put the wing reels up front. With good "eyes-front" visibility of the outside reels, the operator can hold a closer, straighter line with less fatigue—even at mowing speeds over 5 mph. That means you're getting the most out of the LF-100's wide 100" cutting width in every pass.

This unique, up-front reel configuration also provides better access to all reels, so there's less time wasted emptying baskets, inspecting reels or performing maintenance.

Other high-productivity features include "on-the-go" pedal-operated reel lift to cross-cut fairways more efficiently. A tight turning radius and power steering provide extra maneuverability and improve striping accuracy.

Exclusive reels give a superior quality fairway cut.

Lighter greens-mowing reels tend to rise up in areas of heavy thatch, giving the fairway a "wavy" look. However, the LF-100's rugged, heavy-section, seven-blade reel design—a Jacobsen exclusive—hugs the turf to create a smooth uniform finish that's the envy of the industry. These fully floating, steerable reels follow every contour of your course, beautifully.

To preserve that greens-like cut, the LF-100's weight is evenly distributed over newly designed low-ground-pressure tires. Each tire rolls on a separate track, for lowest compaction possible and less marking. The low-profile, four-wheel, wide-track stance of the LF-100 offers added stability and traction on hills.

Goes up sharp inclines where others fail or don't even try.

New "on-demand" 4-wheel drive option helps the LF-100 climb hills where others give up—without the turf-damaging wheel spin and slippage competitive units can produce. The operator can go from 2-wheel-drive to 4-wheel-drive, and back, "on-the-go."

Built with Jacobsen dependability and long life.

The rugged, proven chassis and extra heavy-duty lift arms are designed for trouble free mowing, day after day—even at higher mowing speeds.

For longer life and dependability, the LF-100 comes equipped with a tough, fuel-efficient, 22-hp liquid-cooled diesel engine. The wide-core radiator and heavy-duty air cleaner help keep the engine cool and clean in demanding conditions.

The simple, easily maintained hydraulic system has separate, high-capacity pumps for traction and reel drive, for smoother operation and performance. Plus, the entire machine is backed by your Jacobsen distributor, so you're never far from dependable parts and service support.

Durability. Quality of cut. Productivity. With all the LF-100 has going for it, it's time you saw what you're missing. For more details, or to arrange a demonstration, call your Jacobsen distributor. Or, complete and mail the attached postcard.

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One look will tell you that the new LF-100 isn't like any other mower on the market. Its unique, low-profile, wide-track design produces the lowest ground pressure of any lightweight fairway mower, so your golfers will never know it was there. Yet its five 22" reels — developed specifically for fairways — cut a wide 100" carpet-like path no other fairway mower can touch. It's literally in a class by itself. A class that puts you out front. And it's available exclusively from Jacobsen.

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THE EXTENSION LINE

Hole Notes welcomes the addition of Bob Mugaas of the University of Minnesota Extension Service as a regular contributor. As Hennepin County Extension Agent, Mr. Mugaas will compile various articles related to the golf field for our information. Bob is an excellent source for answers to many questions on horticultural problems. He may be reached at 542-1420. Written requests should be sent to:

Bob Mugaas
Minnesota Extension Service-Hennepin County
701 Decatur Ave. N.
Suite 105
Minneapolis, MN 55427

This month's article covers bark beetles and their affect on pine trees.

DROUGHT STRESS BARK BEETLES TAKE TOLL ON MINNESOTA PINES

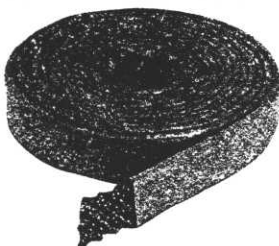
by **JEFF HAHN**
Minnesota Extension Service

Many Trees suffered through the drought of 1988. Pines were no exception and thousands were killed by the pine engraver beetle, *Ips pini*. This beetle attacks all species of pines, although red, jack, and Scotch pines are most commonly affected. The beetles bore into fresh logging slash or stressed and dying trees. Drought stress of pines is usually rare in the Great Lakes region; the number of pines killed this year by bark beetles was much higher than in normal years.

When pines are stressed, pitch flow and production of chemicals toxic to bark beetles are reduced, leaving trees susceptible to insect attack. Pine engraver beetles locate these stressed trees with their sense of smell. The adults excavate galleries and deposit their eggs. The larvae hatch and feed in the phloem layer, slowing girdling the infested branch or trunk. This results in eventual death of the tree.

It is difficult to combat the pine engraver beetle. The Department of Natural Resources (DNR) suggests several strategies for urban areas including watering, thinning overcrowded stands, using pheromone-baited traps, and, in some cases, using "trap" trees. Removing limbs killed by bark beetles does not lessen the tree's attraction to the beetles unless tree vigor is also improved. If properly done, stand thinning, watering, and fertilization can help

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improve tree vigor.

Removing trees killed by bark beetles will not affect beetle reproduction unless this material is destroyed while the beetles are still under the bark. Adult beetles overwinter in the duff and litter. The following spring, they will use green logs and slash from late winter cuttings or stressed trees for reproduction. It is important to destroy or debark such material or remove it from the site for processing before spring arrives. Cuttings made during the fall or early winter generally are unsuitable for breeding because they have dried out by the time the beetles resume activity the following spring.

In areas with a large number of pines, DNR relies primarily on pheromone traps, thinning or harvesting stands, and tree traps. Using trap trees requires that trees be sacrificed to draw the beetle attack. These trap trees should be monitored closely by someone who is familiar with the bark beetle life cycle. Timing is critical and failure to remove and destroy trap trees before beetle emergence actually makes the problem worse. Assistance is available through the local DNR office.

Pheromone-baited traps use a synthetic lure to attack beetles to a trap where they are collected and killed. The value of pheromone traps for Ips pini control is still uncer-

tain, but DNR is currently conducting research trials on this technique.

Bark beetle populations probably will be high again this year, causing concern for pines. People wishing to receive a copy of the new publication "How to Identify and Manage Pine Bark Beetles" should contact their local DNR forestry office or possibly their county extension agent.

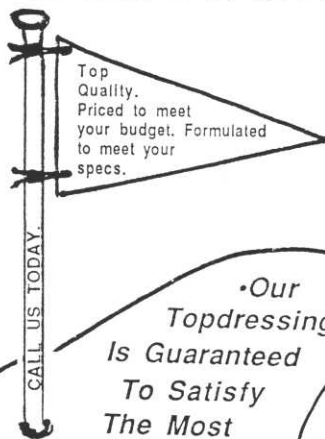
SHORT COURSE IN HUMAN RELATIONS

The best short course in human relations we've heard about is this one published by columnist Norton Mockridge:

- * **The six most important words** in our language are, *I admit I made a mistake.*
- * **The five most important words** are, *You did a good job.*
- * **The four most important words**, *What is your opinion?*
- * **The three most important words**, *It you please.*
- * **The two most important words**, *Thank you.*
- * **The single most important word**, *We.*
- * **And the least most important word**, *I.*

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OFF THE TOP OF MY HEAD

**GREG HUBBARD, CGCS
Editorial Chairman**

Many of us were initially introduced to the golf course superintendent's profession early in our lives. Whether it be working, playing, or hanging around a golf course, many career decisions were based on the positive aspects of this environment. The attraction of the outdoors, the seasonal nature of the job, and the immediate satisfaction of a job well done were all motivating factors in choosing our line of work. For me, there was no greater gratification than seeing the results of a finely mowed fairway or green. Compliments from the golfers were a great reward as I finely tuned the golf course for their enjoyment. I'm afraid, however, that those days are quickly leaving us. Rather than mowing grass and tending to the needs of the golf course, we must now respond to the demands of government and concerned citizens. As our job status becomes elevated and more complex,

we must correspondingly become more professional in our duties as golf course superintendents.

This new approach is demonstrated by the MGCSA's current involvement with labor laws and water use in Minnesota and their effects on golf courses. As shown by recent efforts in these areas, superintendents must be keenly aware of influences outside of the golf course which may be making their decisions for them. We must be increasingly concerned with the effects our decisions have on the environment and those around us. Our response to these laws and regulations must be measured and quick. For those who choose to ignore their implications, we must question the professional approach and integrity of the individual. Resistance to response is inevitable, but the government will punish those who ignore its dictates. If you choose to ignore the Employee Right-To-Know Law and its requirements, what about others? Will you violate the Child Labor Standards Act and hire underage people at your course? Do you follow the laws regarding hazardous wastes and pesticides? How long can you avoid the DNR and water management regulations? All these laws and others have been introduced in recent years and it is your responsibility to follow them, insuring safety in the workplace and fairness to your fellow workers and yourself. You, as

HUBBARD to Page 17

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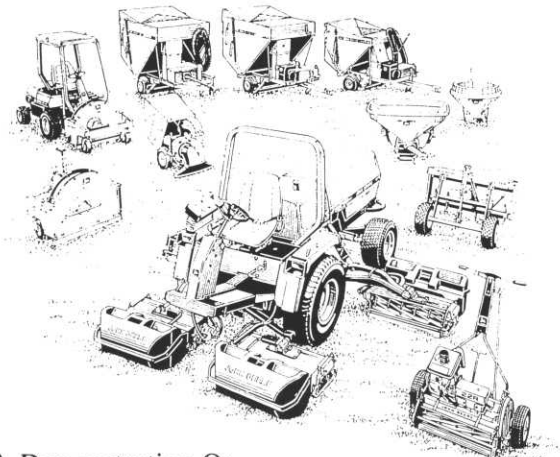
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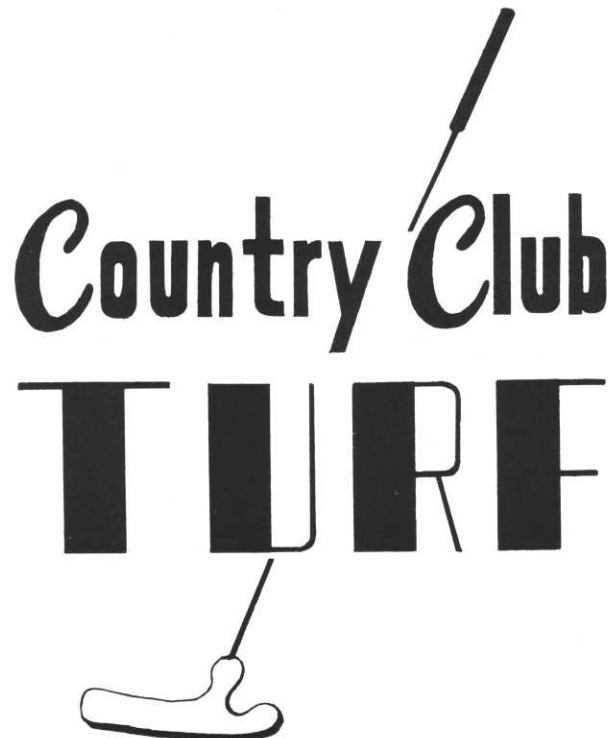
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HUBBARD from Page 15

the manager, must see that these laws are followed or suffer the consequences. MGCSA is trying to keep you informed of your options, meeting the everchanging demands of an increasingly complex job environment.

Like it or not, these laws will define our way of life, at home and at the workplace. Ignorance of the law will not be a defense for those who violate them. As one superintendent recently said, "The days of just cutting grass are over". We can no longer afford to be lackadaisical in our approach to government regulation. It will only become more encompassing and complex, requiring more and more demands on our time and resources.



1989 MGCSA Monthly Meeting Calendar

* Revised

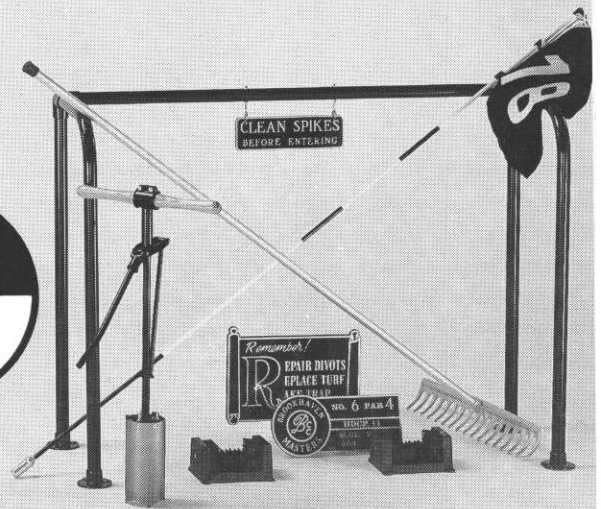
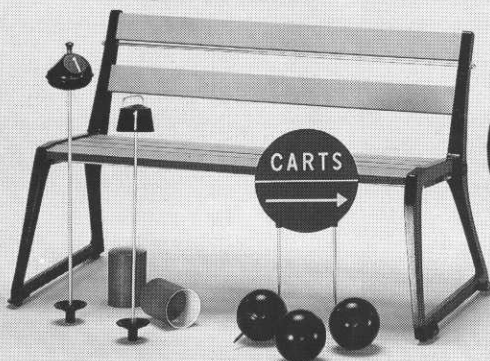
<u>DATE</u>	<u>SITE</u>
April 10	New Prague Golf Club
May 8	Edenvale Golf Club
June 5 *	Detroit Country Club
July 10	Pebble Creek Golf Club
August 7	Edina Country Club
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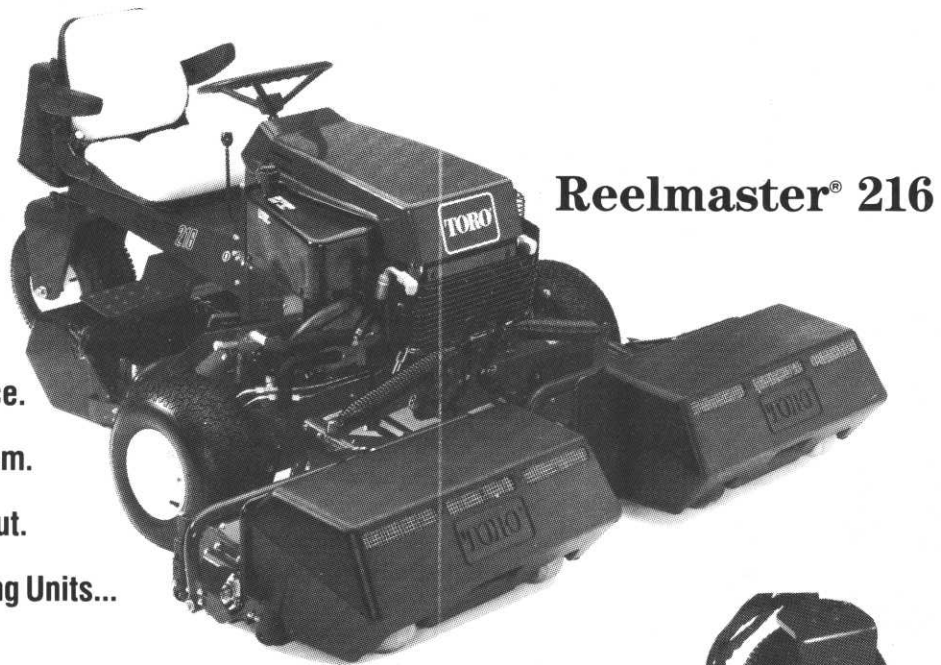
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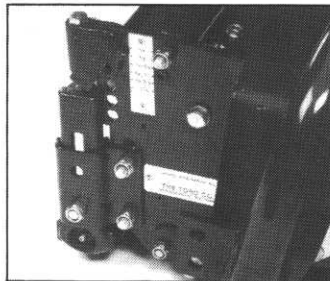


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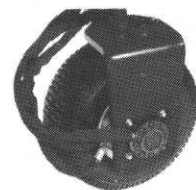
Height of Cut Adjustment.

Height of cut can be changed and reset to previous setting right out in the field without measuring again. Nobody but Toro makes it so easy to get a level quality of cut every time. Height of cut range varies from 1/4" to 2 5/8" depending on reel selection.



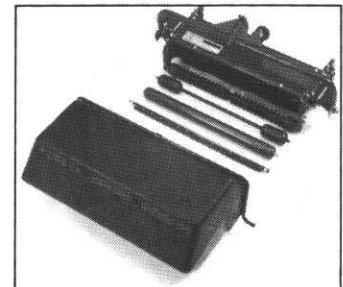
Three Wheel Drive.

For added performance and versatility, the Reelmaster 216 features "on-demand" 3 wheel drive. And a 3 wheel drive kit is available for earlier models too. An excellent choice for hillside operations.



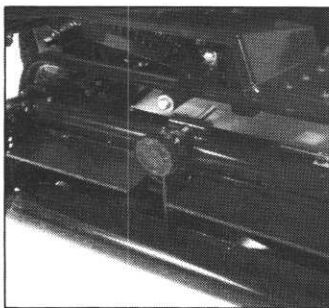
Grass Collection.

Large grass baskets are simple to attach and remove. The baskets ride on the carrier frame independent of the cutting units to safeguard quality of cut. **Grass Deflector Shields** uniquely convert from front collection of grass to rear discharge.



Customize Your Reelmaster 216.

Choose 8 or 11 blade floating cutting units for superior contour following, or 5 blade fixed cutting units for heights of cut. Grass Baskets are available too. Other options include Full, Sectional, and Wiehle Front Rollers and a Comb Kit.



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