

TORO

Advantage

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Information From Toro to Help YOU and YOUR Course



Introducing the New Toro® Groundsmaster® 4500-D

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TORO.

Count on it.

TORO

The New Toro® Groundsmaster®

Productivity And A Quality Cut For Demanding Turf

Toro has done it again! In response to superintendents' needs for more productive rotaries that help them improve their quality of cut, Toro announces yet another breakthrough mower.

Introducing the Toro Groundsmaster® 4500-D, the latest addition to our family of ground-following rotary mowers.

Featuring Toro's exclusive Contour™ Plus cutting technology, the Groundsmaster 4500-D has five free-floating decks that follow the contour of the terrain so you can get a championship-quality cut on undulating surfaces.

Better yet, the decks on the 4500 deliver a wide nine foot cut (2.74 meters) to give you a big boost in productivity. Also, with its 60-HP Kubota® turbo charged engine, full-time bi-directional four-wheel

drive and superior traction, the 4500 promises you a better cut in demanding places, like roughs and slopes.

Power, versatility, productivity... could you ask for more? Actually, yes, which is why we built the Groundsmaster 4500-D for easier maintenance, user-friendly design, better striping capabilities, operator comfort, a quieter engine and more.

Real-World Proven

"I'm convinced it's the best rotary mower out there," says Bryan Miller.

Miller is Golf Course Superintendent at the Georgian Resort in Villa Rica, Georgia, an 18-hole, Tom Fazio-designed course near Atlanta. Last year, they decided to replace their reel mowers with rotaries in the rough areas. "We had undulations wreaking havoc on the

mower, or it would scalp the edges," Miller says. So, he called Toro.

"They discussed this new mower, but told me it was still in development," he

or spins anywhere."

Connell is the superintendent at the Columbia Country Club in Columbia, South Carolina, a 27-hole private facility



The Toro® Groundsmaster® 4500-D has five Contour™ Plus cutting decks that follow the contour of the terrain for exceptional quality of cut on undulating surfaces.

recalls. "I told them if that machine was everything it's made out to be, we'd love to get it here." He arranged for a demonstration of the prototype 4500, and liked what he saw.

"This is a great innovation," he adds. "I think the quality of cut during difficult times to mow is going to be even better than reel mowers—like in heavy grass, heavy dew or debris. It's going to allow us to mow these areas like we want to and maintain the quality."

"It didn't bog down a bit," agrees Jeff Connell, another superintendent who has had personal experience with the 4500. "It has an extreme amount of horsepower, so you don't have to worry about going through thicker grass or wet grass. With that four-wheel drive, it also didn't slip or make any kind of tire ruts

designed by Ellis Maples. Presently undergoing a major renovation, the physical layout of the course had created particular equipment needs.

"We mow close to 100 acres," he says, "and we were just not getting all the way around the golf course as many times as we needed to. Also, we've got a lot of bunker faces that kind of go down. It seemed we couldn't get in without scalping."

Last spring, Connell was invited to a demonstration of the Groundsmaster 4500-D. He was quickly impressed.

"The biggest thing I liked about it was the solid roller on the back and the anti-scalp rollers on the front," he says. "You could actually mow over the top of a bunker face and not get any kind of scalping whatsoever. The nice thing about the solid roller in the back is that

4500-D



you get a nice even cut. You know, the ground is not totally level out there, but having this solid roller all the way across, it's a lot more uniform."

"I'm convinced it's the best rotary mower out there."
— Bryan Miller

like it in this size category," explains Tim Koch, Toro's Marketing Manager of Groundsmaster Products. "It has incredible power for a nine-foot machine, with 117 foot-pounds of torque available. The hydraulic parallel traction system gives superb traction, and it's truly very strong. That means better ability to maneuver on hills.

"What this machine is really about is undulating terrain and superior cutting," Koch says. "It's being able to mow in rough areas with a rotary product.

"These features all combine to produce a fantastic quality of cut," he emphasizes.

Better for Everybody

In addition to its superior quality of cut on undulating ground, the Groundsmaster 4500-D is more enjoyable to operate and maintain. Among its popular features are easy serviceability and accessibility: the decks can be raised or removed quickly, and in almost no time, the exterior

enclosures can be pulled off without tools, so technicians can get at everything right away.

Even with all that horsepower and torque, the engine speed on the Groundsmaster 4500 is quite low—just 2600 rpm.

Combined with a variable clutch on the engine-cooling fan, that means much lower sound levels.

"The engine provides many benefits in addition to more power

and torque, slowing

the engine down to 2600 rpm results in a quieter operation," Koch points out.

Other unique features include a large operator platform and easy-to-reach deck levers. There is even a cup holder and extra space available for a water cooler and other storage.



Jeff Connell (inset) is the golf course superintendent at Columbia Country Club in Columbia, South Carolina, a 27-hole private facility. The layout of the course is particularly suited for the Toro® Groundsmaster® 4500-D.

Just the Beginning

With shipments starting in early Spring 2002, the Groundsmaster 4500-D is sure to be popular with any superintendent who wants more power, more control and a better cut on undulating terrain. But that's not all.

Also shipping in the Spring of 2002, the even larger 4700-D features seven free-floating cutting decks, which produce an amazing swath 12.5 feet (3.8 meters) wide! Designed for rough mowing, it will be a real productivity booster. And because it's from Toro, you know it'll perform.

All things considered, Toro Groundsmaster mowers are taking precision cutting to a whole new level... especially on ground that isn't. ■

Although it has a wide cutting ability, the Groundsmaster 4500-D is remarkably versatile. It can zip through roughs and then do great mowing on trim areas as well.

"It gives you a large piece of equipment that acts like a small one," Connell adds. "It cuts a large swath, but in the fashion and closeness of a smaller piece of equipment. It acts as a trim mower; it does both jobs at the same time."

"There's nothing



The Georgian Resort, Villa Rica, Georgia.

T.Map™ Software

Picture This: Improve Irrigation Control With T.Map™

Toro has made irrigation management easier by making it more advanced. Building on our history of innovations and leadership in irrigation systems, we consistently incorporate the appropriate technology into our products.

click of your mouse.

T.Map's advanced technology interacts with the SitePro control system database to create dynamic graphic displays of your golf course. Using comprehensive interactive site maps on your computer screen, you can accurately locate irriga-

up real-time screens indicating areas in question, and then click on the map symbols to adjust sprinkler run times, engage rain holds, initiate starts and syringes, and more. Field-status monitors tell you which satellites and sprinklers are running and which are on hold, and alert you to any problems.

You can also use SitePro and T.Map to display simulations of projected water flow, measure areas and distances, issue work orders, help in event planning and many other tasks.

Control is Just a Click Away

"With T.Map, you are looking at your course on the screen, just as it is physically in the real world," explains Aivars Jurkis, Toro's Senior Customer Support and Technical Advisor. "You get a picture of your course with all these dots on it to show the irrigation stations. You just click on the ones you want." It's that simple.

"The SitePro engine runs the irrigation system. T.Map just allows you to view the set-up a lot more graphically," adds Bill Thornton, Toro's Western Regional Sales Manager. "That helps especially when the operator isn't a computer expert."

"For example let's say there's a spot that's dry on the golf course, and you want to give it more water," Jurkis explains. "Just click on the head there. T.Map will ask you how long it should



Tom Walker is the golf course superintendent at the Inverness Club in Toledo, Ohio. He credits the T.Map™ system for providing flexibility and efficiency.

The development of Toro's PC-based SitePro® central control system gave superintendents an amazing way to improve irrigation management and stay informed. As good as SitePro is, those capabilities can be taken to an even higher level.

With Toro's T.Map™, included in the SitePro software, you can create a precise graphic representation of your golf course. T.Map puts a new world of resource management right at your fingertips, because you can use it to make instantaneous system adjustments with a

tion elements such as sprinklers, pipes, sensors, pump stations, electrical lines, valves and wire splices. T.Map also shows you the precise, in-scale locations of physical features on your course, such as greens, bunkers, cart paths and so on, right down to individual trees.

With T.Map software, you simply pull



run; enter how long you want, and it will automatically turn it on. You don't need to know the satellite station number or any of that, because it looks it up for you."

"It's just a great, great benefit," says Tom Walker, Golf Course Superintendent at The Inverness Club in Toledo, Ohio. "The ability to change the time of certain sprinklers, to take your mouse and



Toro's T.Map™ system provides an accurate graphical representation of the golf course to simplify irrigation management.

loop around a few heads and put them on hold for one day, two days, whatever, it's wonderful."

Built in 1903, The Inverness has hosted many major tournaments, including four U.S. Opens. It typically ranks among the best-groomed courses in America, so Walker has high standards to uphold. He feels that SitePro and T.Map have helped him a lot.

"There's so much flexibility," he adds. "Not only is it an excellent irrigation package, it also gave me an accurate map of the golf course. I can use it for charting square footages, charting out holes, locating drain lines, even trees," he says. "As far as saving me time and getting the job done better, it's just wonderful."

Easy Installation

When T.Map is installed, whether with new or existing SitePro software, it requires a designer or consultant to provide an AutoCAD image of the golf course—from a survey, GPS program, aerial photos or even drawn freehand. GPS isn't required for T.Map, but it does

improve accuracy.

The AutoCAD data is then converted into T.Map-shaped files and layered color-coded images.

"What the data conversion does is to look at all this course info, create what it needs to create, and saves it in a zip file," explains Toro's Jurkis. "That one file is all you need. Tell SitePro to do a File Open, and there it will be."

When setting up the initial AutoCAD image, which most new courses already have, you can determine how detailed you want it to be.

Everything You're Looking For

"It's unlimited what you can do," says Steve Glossinger, Golf Course Manager at Caves Valley Golf Club in Baltimore, Maryland. "We put in all the surfaces, contour lines, fairways, bunkers, trees, even paths and buildings. We did just about everything on the property."

Caves Valley, site of this year's Senior Open, has relied on computerized irrigation control for several years, but T.Map is a big improvement, Glossinger feels.

"I didn't know it was going to be this good, quite frankly," he says. "It's friendlier; I picked up on it quicker. It has everything superintendents are looking for. With this system, you really see your golf course and where your

heads are and what you're running. After this," he adds, "you wonder how you survived with the old system. It's that good."

At Caves Valley, T.Map does much

more than irrigation. "You can see your whole course," Glossinger says, "so we use it as a tool to implement strategies. For

"As far as saving me time and getting the job done better, it's just wonderful."

— Tom Walker

example, we were getting ready to put up corporate tents, but instead of going down there and doing all that measuring, with a couple clicks on the screen we knew how many tents would fit."

The advantages of SitePro and T.Map are just starting to be discovered—water conservation, irrigation troubleshooting, locating trees for removal, determining square footage of greens and bunkers, measuring for paving estimates—and the list goes on. Better yet, it's easy to get introduced to the program and quickly benefit from it.

"You don't need technical savvy to run this," says Walker. "You just point your mouse at something and click. It's 100 times simpler than programming a VCR."



Golf Course Manager of Caves Valley Golf Club Steve Glossinger uses a 40 inch (101.6 cm), flat panel display with his T.Map™ system.

Factory Service School

Toro's Customer Factory Service Education Program Earns An A+

Being a leader in the equipment industry requires more than great equipment. We depend heavily on the people who operate and service our equipment. That's why we have a long-standing commitment to training and education, to help ensure that customers are as comfortable and knowledgeable about equipment as they can be.

One of the many popular things we offer in our training spectrum is Toro's Customer Factory Service Education Program, or as it's more commonly known, "Factory Service School." Our Factory Service School is a three-day session held at Toro's Training Center in Bloomington, Minnesota, including a visit to our assembly facility at Tomah, Wisconsin. Designed primarily for technicians, the guests at Factory Service School attend a variety of helpful seminars that address issues of concern to them and the industry. They also get unique opportunities to meet other technical professionals from around the country and exchange ideas.

Created over 20 years ago to provide training for distributors, Toro's Factory Service Schools have since been expanded to include technicians from golf courses, sports facilities and municipalities. Currently Toro offers these end-user Factory Service School sessions about five times a year.

Useful Information

The Factory Service School program usually starts on a Sunday night with a welcoming get-acquainted reception. Then over the next three days, "students" of Factory Service School attend informational tours, presentations and hands-on sessions addressing such help-

ful topics as cutting unit adjustments, hydraulics, electrical systems, equipment maintenance, diagnostics and troubleshooting.

"It was very informative," says Rick Paré, Equipment Manager at Eagle Crest Resort in Redmond, Oregon. He attended Factory Service School this past September. "Training is beneficial for everybody. You always like to see new updates and new innovations that are coming along. The mere fact that greens are so fast and are cut so short now, we've got to be on our toes all the time."

In addition to the training classes and seminars themselves, Paré enjoyed the chance to swap notes and tips with the technicians he met there.

"One person's attitude on how to maintain a piece of equipment differs from another's," he adds. "Whenever you get together with a bunch of technicians or superintendents, you always talk about what works for you and what doesn't."

"When you hear someone else with a situation similar to yours, it helps," agrees Michael Koopman, another technician who attended Factory Service School last year. Koopman is the Equipment Manager at Old

Collier Golf Club in Naples, Florida.

"It was geared more for education, but they gave us the option of giving our feedback," he says about Factory Service School. "I think one of the best things—and something that people are really interested in—is when they brought the engineers in and asked if we had any questions for them. That was on Monday, the first day. Then, if they couldn't answer a question, they said they would get back to us before we left for home on Wednesday.

"One thing I'll say," he adds, "is that they didn't run away from someone who said, 'Hey, I have a problem with something.' They listen to what the people have to say."

The chance to meet with Toro engineers and ask them specific questions has always been one of the most popular features at Factory Service School. The technicians in attendance know their equipment better than anyone, and Toro appreciates the opportunity to get first-hand input from people who put the machines through their paces every day.

"They asked us if we had any problems, or if we had any questions we wanted answered," Paré says. "I thought that was good; they were very straightforward."

Customer-Focused

Given the wide range of products Toro represents, part of the challenge



Toro's Factory Service School gives equipment managers and technicians hands-on instruction on how to properly service Toro equipment.



Technicians benefit greatly from the interaction with Toro employees and peers at the Factory School.

with any type of training is to make sure it's relevant to a particular customer, to give him or her the information they need most.

"We have two different types of schools we offer to our customers," explains Jim Peterson, Toro's Education and Learning Manager in the Commercial Products Division. "One has a golf focus and the other has a grounds focus. So the technical information we provide is specific to the needs of the technician," he says.



Michael Koopman services almost exclusively Toro Equipment at Old Collier Golf Club.

“For a golf school, we would concentrate on products used on greens and fairways, and those things of particular interest in a golf setting for that group of customers,” Peterson says. “For example, golf school might focus more on reel-type cutting units. Some of the most lively discussions we have at any golf school will surround the subject of reel-type cutting units.”

Tailoring the presentation material to keep it pertinent and interesting is vital when your goal is to offer truly useful material to those in attendance. Toro firmly believes in the value of making information available to the people who need it. We also believe in putting that information to good use.

“At the end of the day, merely learn-



The equipment facility at Old Collier Golf Club, Naples, Florida.

ing is not the goal; behavior change is the goal, and learning is how we get there,” Peterson says. “We want to make sure that whenever we get into a certain topic or subject, that the participant is able to make that leap, where they’ve learned something new and now they can take that and use it. We want them to be able to do something more efficiently, or do it in a new way that improves their skills and abilities as a service technician,” he says.

“Helping them to personally grow in their occupation is what this is really all about,” Peterson adds, “and it’s going to benefit everybody if we can do that.”

Next Session Sept. 16–18

An upcoming Toro Factory Service



Michael Koopman upholds high standards for the quality of his maintenance facility.

School is scheduled for September 16–18, 2002. Some of the planned topics for the program include an introduction to the ACE System to aid in troubleshooting, and a seminar called “Cutting System Dynamics,” which addresses the design, set-up and adjustment of cutting units. The cost of attending is \$600 US per person, which includes three nights’ lodging, meals, local transportation and all classroom materials.

If you would like to attend a Factory Service School, or want to obtain more information about it, please contact your local Toro distributor.

“I’m glad that I went, and I would love to go again,” says Paré. “There’s still a lot to learn.” ■

A Memorable Trip Becomes Truly Unforgettable

Rick Paré and Mike Koopman both have good things to say about their trips to Toro’s Factory School, but their experiences there will undoubtedly be forever fixed in their memories for other reasons: they were attending their sessions on Tuesday, September 11, when the horrible terrorist attacks hit America.

“We were going through the plant, in the special operations area, and that’s when we heard about the plane crashes,” recalls Paré. “So it got cut short, and we didn’t get to see everything we would have liked to, but they did the best they could with the situation the way it was.”

“I was scheduled to fly out on Thursday, but didn’t end up leaving until Saturday,” adds Koopman. “We had to stay all those extra nights, but Toro said, ‘Don’t worry, we’ll take care of it.’ On Tuesday, I’m sure those Toro guys would have liked to go home to their families, too, but they stayed there with us. They could have just sent us back to the hotel for two or three days, but I don’t think that crossed their minds,” he says. “I was impressed with that.”

Paré was actually able to head back home to Oregon shortly after the attacks, but it required some fortunate coincidences.

“On September 11th, the airlines were shut down,” he explains, “but my wife got me connected with a salesman from her company who was in Minneapolis for a convention. He happened to run into another guy from our area and a friend of his from Boise. He told me, ‘I’ve got room for one more,’ so I hitchhiked a ride home with them. It was 30 hours... not the way I wanted to see the country,” he says.

“But I feel so strongly about the Toro program and wanting to return, that I would hitchhike back!” ■

TORO

Operator Training



ProCore® Operator Video Teaches Proper Techniques

When you don't do a particular job every day, it's always a good idea to refresh your skills before jumping into the task. With that in mind, Toro recently released the Toro® ProCore® Operator Training Video (Part No. 01087SV) to help sharpen your skills.

Recorded in both English and Spanish, the video covers the initial set-up and operation of the ProCore series of aerators. These aerators cover a lot of ground so any missteps can slow you down. Taking the time to view this short video before aerating is useful for new operators as well as a nice refresher for seasoned operators. The operator's manual should also be read in its entirety to ensure safe and proper operation.

Some basic tips for good aeration:

Make sure everything is level from the start. Mount the aerator on a level surface and check the machine to see that it is level before beginning operation.

Pay close attention to the Power Take Off (PTO) shaft. The PTO cannot be too long or it will damage the shaft or gearbox. It may need to be changed by the equipment technician.

Use the best settings. The aerator should be set to lift about 4 inches (10 cm) off the ground during operation. Adjust the aerator to a 4-degree forward angle for the best holes. NEVER angle the aerator rearward or damage may occur to the machine or turf.

Get the right tines and set the penetration. There are a variety of tines to choose from. The depth chart in the operator's manual has a guide to tines and proper settings. Set the tine depth the same on both

sides of the aerator. If tine depth is changed, recheck the aerator angle to ensure it is still 4 degrees.

Practice using the aerator. Before actually aerating the course, find a clear area and practice stopping and starting and raising and lowering the aerator. Be sure to mark all obstacles on the course to avoid things like irrigation heads and electrical wires. Any debris like rocks that will damage the aerator should also be removed.

Start correctly.

To begin aerating, use a low tractor engine rpm in an appropriate gear. Set the speed between .6 and 2.5 miles per hour (.97 and 4.02 kmh). As you begin and the tractor moves forward, fully lower the 3-point linkage and increase the engine speed until you reach 540 rpm on the PTO. The machine must be on the ground when set at 540 rpm. The aerator may be damaged if the tines are not working in the turf when operated at full speed.

Use the right front tractor wheel as a site guide. The right front tractor wheel should be used as a site guide to maintain equal lateral hole spacing with the previous pass. This will allow you to use the offset of the aerator to stay off the area you already aerated.

Stop correctly. When finished

aerating, lower the engine rpm, raise the aerator, depress the clutch on the tractor with your foot and stop the PTO.

Always stop for people. If anyone comes near the area of operation,



move off the area you're aerating and stop the machine until the area is clear. Since tines are pummeling the surface of the turf, a tine may break and fly off or debris may fly out from the aerator. Always be aware of any people around you.

The new ProCore® Operator Training Video is available from your local distributor. Other new operator training videos available include: the Groundsmaster® 3500 (Part No. 00061SV), Groundsmaster® 4000 (Part No. 01085SV), and the Greensmaster® Flex™ 21 (Part No. 01086SV). Each video is \$16 US. ■



Capacitación de Operadores

En el video vídeo de ProCore se explican las técnicas correctas de operación

Cuando un operador deja de hacer un trabajo particular todos los días, es recomendable que repase lo que sabe de ese trabajo antes de volver a realizarlo. Pensando en esto, Toro preparó recientemente el video vídeo de capacitación de operadores del equipo Toro® ProCore® (número de catálogo 01087SV) para ayudar a los operadores a mejorar sus habilidades.

Está narrado en inglés y español, y cubre la preparación inicial y la operación de los aireadores de la serie ProCore. Estos aireadores cubren una gran extensión de terreno y cualquier paso incorrecto puede

retrasar el trabajo. Será muy útil dedicar el tiempo necesario para ver este breve videovideo antes del de hacer trabajos de aireación tanto en el caso de operadores nuevos como de operadores experimentados que necesiten una buena repasada. Debe leerse completamente el manual de instrucciones para asegurar la operación segura y correcta.

Sugerencias básicas para una buena aireación:

Asegúrese de que todo el equipo esté nivelado desde el principio. Monte el aireador en sobre una superficie nivelada y revise la máquina para asegurarse de

que esté nivelada antes de comenzar la operación.

Ponga especial atención al eje de la toma de fuerza (PTO). La toma de fuerza no debe ser demasiado larga porque podría dañar el eje o la caja de engranajes. Quizá Es posible que deba ser cambiada por un técnico especializado.

Use las los mejores regulacione-sajustes. El aireador debe ser ajustado para elevarse unos 10 centímetros del suelo durante la operación. Ajuste las puntas a un ángulo de 4 grados para que hagan bien los agujeros. NUNCA ajuste el aireador a un ángulo hacia la parte trasera porque podría dañar la máquina o el césped.

Use las puntas correctas y ajuste la penetración. Hay diversas puntas entre las que puede escoger. La tabla de profundidad en el manual de instrucciones tiene una guía de puntas y ajustes correctos. Ajuste la profundidad de las puntas al mismo nivel en ambos lados del aireador. Si cambia la profundidad de las puntas, vuelva a revisar el ángulo del aireador para asegurarse de que todavía esté en a 4 grados.

Practique usando el aireador. Antes de empezar la aireación del campo, busque una zona despejada y practique parando parar y arrancandoarrancar, elevando elevar y bajando bajar el aireador. Recuerde marcar todos los obstáculos en el campo para evitar daños a objetos como cabezales de irrigación y cables eléctricos. Debe quitar los objetos que puedan dañar el aireador, tales como rocas.

Arranque correctamente. Para empezar la aireación, use una marcha lenta del motor del tractor. Ajuste la velocidad entre 0.97 y 4.02 kph (0.6 a 2.5 mph). A medida que comience a avanzar con el tractor, baje completamente el acoplamiento de tres puntos y aumente la velocidad del motor hasta alcanzar 540 rpm en la toma de fuerza. La máquina debe estar en el suelo cuando la ajuste a 540 rpm. El aireador puede

dañarse si las agujas puntas no están trabajando en el césped cuando opera a alta velocidad.

Use la rueda delantera derecha del tractor como guía. La rueda delantera derecha del tractor debe usarse como guía para mantener el mismo espacio lateral entre agujeros después de cada pasada. Esto le permitirá mantenerse fuera del área en que ya trabajó.

Detenga correctamente la máquina. Cuando termine de airear, baje reduzca la velocidad del motor, eleve el aireador, oprima el embrague del tractor con el pie y pare la toma de fuerza.

Siempre pare cuando vea gente. Si alguien se acerca al área donde opera, apártese del área y pare la máquina hasta que la gente se aleje. Como las puntas golpean con fuerza la superficie del césped, una de ellas podría romperse y salir lanzada o podría golpear un objeto que también saldría lanzado del aireador. Siempre esté alerta por si hay gente a su alrededor.

El nuevo videovideo de capacitación de operadores de ProCore está disponible en su distribuidora local. Hay otros videovideos de capacitación de operadores nuevos, incluyendo los siguientes: Cortadora Groundsmaster® 3500 (No. de catálogo 00061SV), Cortadora Groundsmaster® 4000 (No. de catálogo 01085SV), y Cortadora Greensmaster® Flex™ 21 (No. de catálogo 01086SV). Cada cinta de videovideo cuesta \$16 dólares. ■



TORO

Toro® Greensmaster® Flex™ 21

Exceeding Expectations

When Toro introduced the Greensmaster® Flex™ 21 a year ago, the industry had never seen a greens mower like it.

The Flex 21 had been conceived and designed based on specific requests and input from real-world equipment users.

Toro engineers had gone out and talked to superintendents, operators and technicians, all with the golfer in mind, about what they needed in a better walk mower.

That kind of guidance and recommendations led to the many special features of the Flex 21,

The flexible cutting unit is separate from the traction unit so it ensures a superior cut and less scalping than any other mower. This innovative development allows for crisp, tight mowing at the height you want, even on the most challenging greens.

“We developed this product based on customers’ needs and concerns,” says Jerry Goman, lead engineer for the Flex 21. “We were hearing more and more about new grass cultivars and lower height of cut, combined with undulations and movements in the green. There was a need for this machine.”

Tremendously Positive Response

“It surpassed what I thought it would do,” says superintendent Mitchell Wilkerson. “What they promised it would be able to do, it has.”

Wilkerson is a Certified Golf Course Superintendent at the 36-hole Moss Creek Country Club of Hilton Head, South Carolina. Last year, he was in the market for new equipment, and had some specific needs in mind.

“One of our problems was that we have Super Dwarf Champion on our north course, and we have a lot of undulations on our greens,” he says. “At the height we were mowing, with any little movement we would just scalp it.”

Wilkerson had been told about the Flex 21 and arranged for a test with Toro. He was immediately convinced. “That made me a believer. It was just everything they

said it was.” Wilkerson reports.

His new mowers went right into action and immediately made a difference. “On the Super Dwarfs, it was like night and day,” Wilkerson says. “On the undulations, we didn’t see any bruising or scalping. It was pretty dramatic.”

“It was a no-brainer for me when I saw the difference it made,” agrees Steve Nelson, Superintendent at Mississippi Dunes Golf Links in Cottage Grove, Minnesota.

“There are severe undulations on the greens here,” Nelson explains. “My slopes are so severe, for walk mowing there are some greens I could only mow in certain directions.”

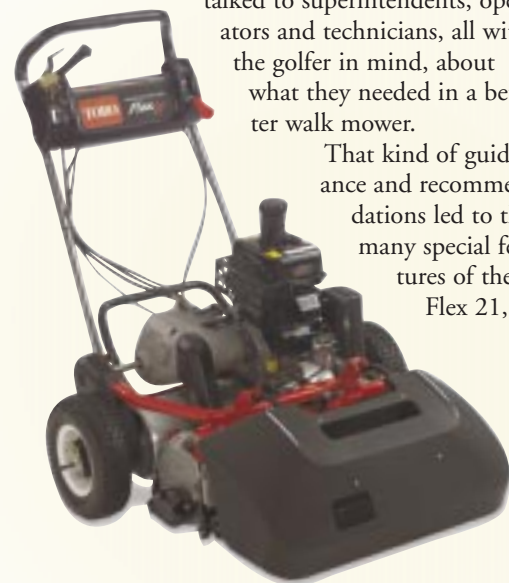
Nelson had tried several different types of greens mowers, but nothing was satisfactory. “I was still getting the scalping,” he adds. Then he heard about the new Flex 21 and was able to borrow one from a friend to try it.

“When I took it out there, I could see what it can do,” he says. “It was nice because I had every other brand out there, and it was easy to see the difference. I didn’t get the scalping the other mowers did.”

Cutting Shorter

With the Flex 21, Nelson was then able to improve the putting surface of his greens. “We wanted to start stepping them down,” he says. “Once I saw that the scalping wasn’t there, I knew I could start taking them lower, and start getting the quality and speed we needed.”

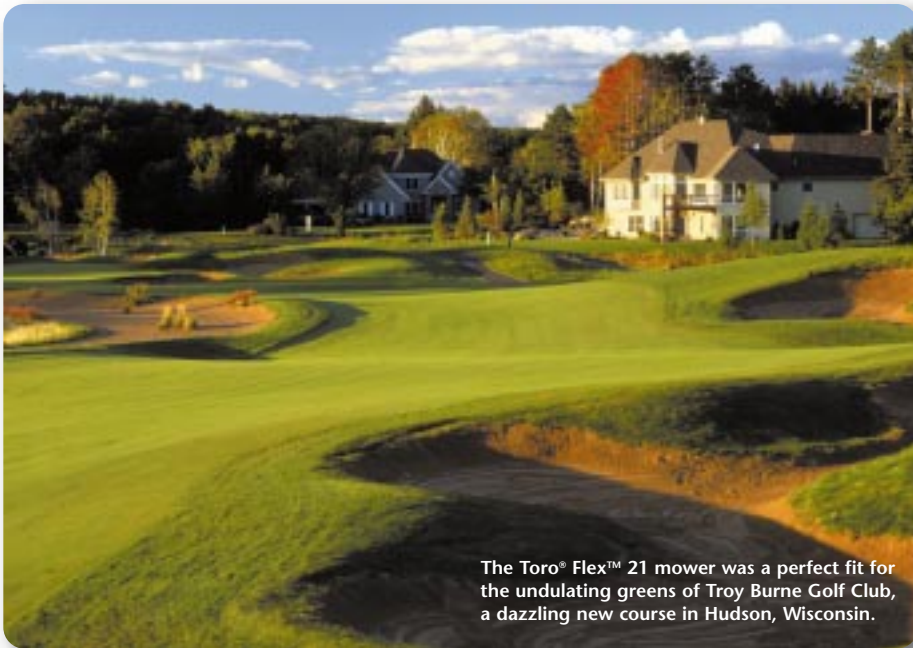
Mitch Fossey is another superintendent



Toro's Greensmaster® Flex™ 21 greens mower offers several substantial benefits to superintendents, operators and technicians.

most notably its unique flexible cutting unit, which is essential for undulating greens and the new Ultra Dwarf grasses. The cutting unit not only flexes from side to side around the bedknife centerline, but also forward and backward around the reel centerline.





The Toro® Flex™ 21 mower was a perfect fit for the undulating greens of Troy Burne Golf Club, a dazzling new course in Hudson, Wisconsin.

scalping, they're pleased with the machine's improved operating and maintenance features.

All controls are easily reachable from the operator position. The clutch and reel engage from hand controls. The reel clutch and the traction clutch have been incorporated into a single multi-function control lever and all controls have been assimilated into the gearbox.

Technicians appreciate the Flex 21's ease of maintenance. No grease zerks means it never has to be greased, and will keep grease off your greens. All you really need to check are the height of cut and bed-knife adjustments. The Flex 21 has an exclusive bedbar geometry that keeps the bedknife aligned for the life of the mower. When the reel wears, the bedbar geometry remains constant to maintain a consistently aggressive, even cut with minimized maintenance.

The Flex 21 was also designed for easy removal of the cutting unit. Simply take out two bolts, and the cutting unit comes off quickly for grinding or replacement.

Golfers will notice the Flex 21 too, because it gives them a good-playing green with faster, more predictable ball roll.

"I've had several people call and ask me if I'd recommend a Flex 21," says Fossey, "and I tell them I recommend it 150%."

"There is nothing else out there like the Flex 21," agrees Mitchell Wilkerson. "I have total confidence in it." ■

who was looking for a closer cut. Fossey is the superintendent at Troy Burne Golf Club in Hudson, Wisconsin, a new course with very undulating greens.

"We were having a lot of problems getting good quality cuts on our greens," he explains, "because they're brand new greens on 100% pure sand base. We just couldn't get a mower to cut short enough for us without damaging or scalping the grass. They built them with some big rolls through the middle, and some pretty severe dips."

Fossey made calls to find out if someone could provide an answer to his problems. He met with a Toro representative, who told him about the new Flex 21 mower, which was then still at the

prototype stage.

"We ended up being a test facility," Fossey explains. "We actually ran the prototypes on that machine. We helped Toro in the fine-tuning process."

At the end of the testing period, Fossey bought the club their own Flex 21s.

High Praise

"It is the best walking greens mower I have ever used," Fossey adds, "and I've been in the business for twenty years and used a lot of different ones. If someone is going to walk mow, this is what they should walk mow with!"

Other superintendents have had similar great things to say about the Flex 21. In addition to excellent close-cutting without



Moss Creek Country Club, Hilton Head, South Carolina, is a 36-hole golf course with very distinctive architecture.

Rotary Mower Tips For Smooth Operation

Toro's line of rotary mowers will provide excellent quality of cut providing they are serviced correctly and consistently. Regular scheduled maintenance will reduce problems associated with equipment wear and tear and ultimately reduce costly repairs. The following guidelines will ensure peak performance of your rotary mowers.

Service Recommendations:

- ✓ Check mower blades daily.
- ✓ Grease gauge wheel pivots daily.
- ✓ Grease gauge wheel axle daily.
- ✓ Torque blades every 50 hrs.
- ✓ Grease spindle bearings every 50 hrs.
- ✓ Check drive belt tension every 50 hrs.
- ✓ Check gearbox oil every 50 hrs.
- ✓ Change gearbox oil every 250 hrs.

Irrigation Tools You Shouldn't be Without

When Toro engineers aren't busy developing better products for you, they work on ways to make those products easier to use.

Here are several new tools that were created to make servicing of Toro golf sprinklers faster and simpler than ever. These particular items were designed for Toro 800S Series golf irrigation systems, but all of them are downward compatible to be equally effective with the 600 and 700 Series sprinklers.

Universal Riser Hold-up Tool



Universal Riser Hold-up Tool (Part No. 102-0336).

Now it's much simpler to replace a sprinkler nozzle. This versatile little gadget slips neatly into place

to hold up the riser while you're working beneath it. Multi-directional for use on both 700 and 800S Series sprinklers, the hold-up tool is like having another hand. It replaces part no. 995-55.

1.5" Valve Insertion Tool

This extremely helpful device has been upgraded for more efficient use, especially by providing improved retention of the snap ring during valve installation. This new insertion tool replaces part no. 995-10.

However, if you currently have the existing Toro Valve Insertion Tool #995-10, you can also just modify and improve it yourself with our new 1.5"



1.5" Valve Insertion Tool (Part No. 995-101).

(3.81 cm) Valve Insertion Upgrade Kit (Part No. 102-2063).

5/8" Nutdriver

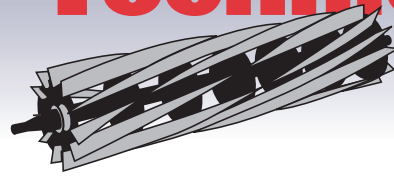
Here's another handy tool you shouldn't be without. This new 5/8" (1.5875 cm) nutdriver is a big help for removal and installation of all 800S Series main nozzles.

Snap-Ring Pliers

Talk about making the job a snap! This durable, long-handled set of pliers provides an ideal grip and reach for easier removal of a sprinkler's valve snap ring, as well as the new removable rock screen. This tool replaces part no. 995-07. ■

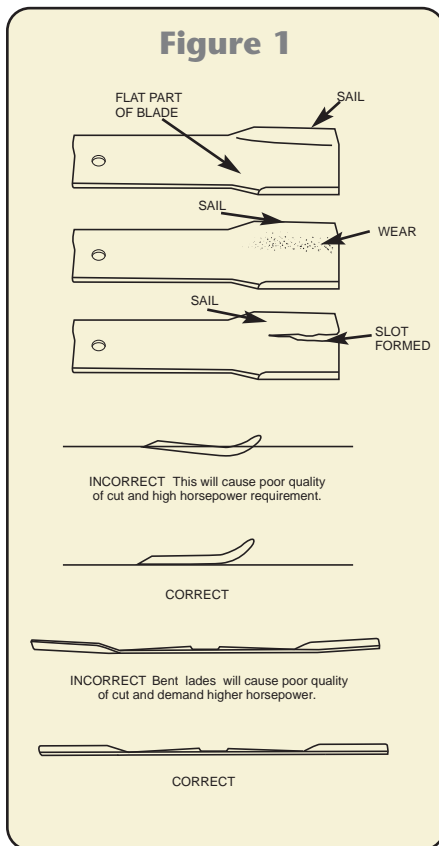


Snap-Ring Pliers (Part No. 995-100).



Inspecting and Sharpening Rotary Mower Blades

Rotary mowers cut grass by the blade's cutting surface impacting against the grass stems at a high velocity. To ensure good quality of cut, the cutting edge of the blade must be kept in a sharp condition. A dull blade will produce a ragged cut



and will require an excessive amount of engine horsepower to rotate the blade through the grass. The most common causes for rotary mowers not giving a good quality of cut are due to dull cutting edges and/or bent blades. Whenever a blade is removed for sharpening:

1. Check the blades to ensure that it is not bent and has the correct attitude in relation to the housing and ground surface.
2. The blade must be sharpened correctly.
3. Check blade balance each time the blade is sharpened.
4. When installing the blade, tighten the blade retaining bolt or nut to the correct torque so it will not loosen during operation.

If blade is allowed to wear, a slot will form between the sail and flat part of the blade (see figure 1).

Eventually a piece of the sail may break off and be thrown from under the housing, possibly resulting in serious injury to yourself or a bystander.

Sharpening Process

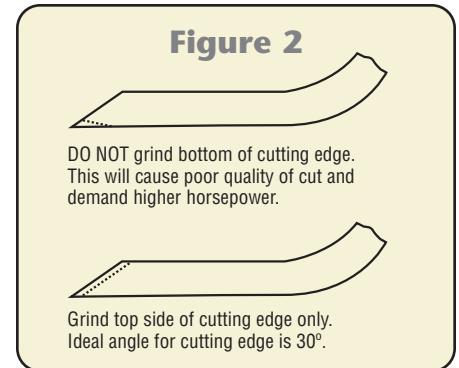
Before sharpening the blade, check to make sure it is straight. Lay the blade on a flat surface to check.

Do not try to straighten a blade that is bent, and never weld a broken or cracked blade. Always use a new Toro blade to ensure continued safety certification of the product.

When sharpening the blade, grind the top surface only, trying to maintain the angle of the original cutting edge. Do not grind the bottom surface or a chisel shape will result (see figure 2). The lowest portion on the blade that contacts the grass must be the cutting edge or the grass will not be cleanly cut and excessive horsepower will be required.

To prevent possible personal injury, wear a face shield or safety glasses when grinding or sharpening is being done.

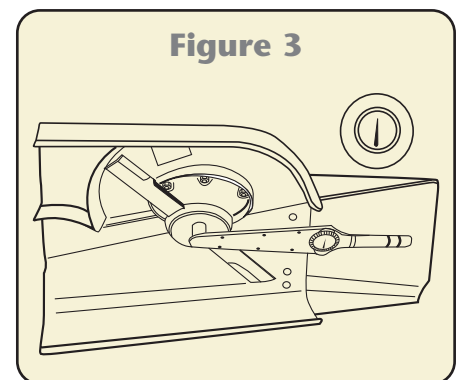
After the blade has been sharpened, check the balance. This can best be done by using a blade balancer tool. A bal-



anced blade will stay in a horizontal position on the balancer. A blade that is not balanced will settle to the heavy side. If the blade is not balanced, grind some metal off the heavy end of the blade.

Blade Bolt Torque

When installing blades, be sure to tighten the blade retaining bolt to the proper torque. Do not use an air or electric wrench to apply the final torque. To prevent loosening or damaged threads, always use a standard torque wrench to apply the final torque (see figure 3).



Check blade retaining bolt torque any time a blade has hit a solid object. ■



Toro® Debris Blowers

An Easy Way To A Cleaner Course

Toro has a commitment to helping you have a better-looking golf course, and sometimes it means providing you with equipment that goes beyond the mowing and growing of turfgrass.

Our versatile line of options and attachments includes several handy debris blowers which you can conveniently use to remove grass clippings, leaves, twigs, pine needles and other debris off of your fairways, cart paths and other surfaces.

Toro offers different sizes of blowers to fit a variety of uses and applications. That's especially true since Toro recently acquired the well-respected Goossen line of debris blower products, now enabling us to offer you an even wider range of options and choices.

Whichever of our debris blowers you select, though, it will give you a much more efficient way of keeping your course neater and cleaner. Instead of relying on a lot of manual labor and back-pack blowers, a Toro debris blower can simply be towed behind a tractor, or for the more compact self-contained units, behind a utility vehicle. In any case, a Toro debris blower enables you to clean

in the opposite direction. That's important because it allows you to immediately make additional passes at an area without having to drive all the way back around, and still blow the debris to one side.

Other standard features on Toro debris blowers include heavy-duty construction on a 1/4" (.64 cm) steel frame, plus skid plates and rear rollers to help protect your turfgrass.

Whatever your golf course's particular situation calls for, there's sure to be a Toro blower that's just right for you.



seat with the electric control kit.

You know what it's like to have unwanted leaves, pine needles or other natural debris detracting from the beauty and playability of your course. So trust a

Toro's new debris blower products allow quick and powerful clean-up of golf course areas.

hard-working Toro debris blower unit to keep your turf looking better... with a lot less time and labor.

Also now available from Toro is Goossen Industries' powerful line of



Toro® Debris Blower 600 (Model No. 44536).

up large areas in a short time, with just one operator.

Toro debris blowers offer you bi-directional air chutes as standard equipment. That means you can blow debris from either side of the unit, and then simply turn the chute to send the airflow 180°

Toro® Debris Blower 400

This compact unit goes anywhere a tow vehicle can. It generates an air discharge of 6000 cubic feet (170 cubic meters) per minute (cfm) and a wind-speed of 140 mph (225 kmh). Airflow direction is easily changed from the operator's seat. Solid, durable construction promises years of trouble-free service.

Toro® Debris Blower 600

When you want to quickly clear large areas of debris, use this Toro blower to create an incredibly powerful wind force of over 9000 cfm (255 cmm) at a velocity of 153 mph (246 kmh). The rugged 600 Series includes a second rear roller to provide even more protection for your turf.

BL-3000 Debris Blower

This versatile self-powered unit (Model No. BL3000PT) packs a lot of force, with 6170 cfm (174.7 cmm) of airflow at a velocity of 145 mph (233 kmh). This hitch-mounted blower is easily towed behind any utility vehicle. Airflow can easily be changed from the operator's



Toro® Debris Blower 400 (Model No. 44523)

Versa-Vac and Mid-Vac products. These machines will help you maintain high quality turfgrass and become more productive at cleaning up your course. For more information on Toro's new blower and vacuum products, talk to your Toro distributor. ■

Innovation Drives Year of Solid Performance

New And Upgraded Products Introduced At GCSAA In Orlando

Did you happen to invest in a Toro® Greensmaster® Flex™ 21 in 2001? How about a Groundsmaster® 3500-D? These are two of our innovative products that helped lead Toro to a year of profitability amid economic and world turmoil.

Beyond delivering products that help make your job easier, what does it mean for you when Toro turns a profit when the economic odds are stacked against it? More new products, upgrades and enhancements to existing products.

New Toro Products Introduced at the 2002 GCSAA Conference and Show

- The 800S Series Sprinklers offer the ultimate in performance, reliability, and durability at the lowest cost of ownership. The new Spike-Gaurd™ solenoid offers more than twice the surge protection than the other sprinklers.
- 720G Series Sprinklers—Toro captured the strength and performance of a golf sprinkler in a small-diameter body that's ideal for tee boxes, approaches and other block system areas with special requirements. Fully adjustable for optimal performance



The Toro® Groundsmaster® 3500-D was introduced in 2001.

- with MultiMatrix® adjustable flow nozzles and the TruJectory feature.
- Smart OSMAC—Now give your E-OSMAC and OSMAC RDR narrow-band satellites standalone capability! Simple satellite programming with the use of a laptop, the Smart OSMAC User Interface software and a serial cable.
- Groundsmaster® 4500-D/4700-D—These powerful rotaries will stripe rough and trim areas with productive 9-ft. and 12.5-ft. cutting swaths.
- Greensmaster® 3150—The most often relied on riding greens mower from Toro gets a new look. It has the same great features you've trusted for years, but now your operators get additional comfort from easier joystick control, plus added safety with the ability to exit the machine from either side and optional Roll Over Protection System (ROPS). The redesigned hydraulics control leaks better and provide dynamic braking and suspension traction control.
- Multi Pro® 5600—Toro's latest concept in spraying is expanded into a machine with a 300-gallon tank. The Multi Pro series now has faster reaction time—it's instantaneous—and more accurate spray control from the Pro Control™ sprayer system.

- Workman® 3000/4000 Series Heavy Duty Vehicles—Ten years after Toro changed the definition of how a heavy duty vehicle should perform, the original Workman gets a boost with up to 25 percent more horsepower. It's available in three engine configurations.
- Reelmaster® 2000-D—With a new engine and greater operator comforts, this new triplex mower offers excellent performance at a real value.

Upgrades, Accessories and Attachments for Existing Toro Products

- New Reelmaster® 5000 and 6000 series fairway mowers can now be fit-

ted with powered rear roller brushes for grass clipping dispersion.

- A new adjustable height-of-cut kit allows for a higher cut—up to 1-3/8 inches—on Reelmaster® 5200-D and 5400-D mowers.
- Improved verticutters are available for the Reelmaster® 3100-D, 5500-D and all 6000 series Reelmasters.
- Hydraulic hose replacement kits prepackage all the components you'll need to service your Reelmaster® 5000 and 6000 series mowers.
- The redesigned Workman includes an optional high flow hydraulics kit for added hydraulic power. Also watch



Introduced last year, Toro's Greensmaster® Flex™ 21 can be customized for your course conditions.

- for new Workman attachments to be introduced in 2002 including a Vicon® Spreader.
- Outfit your Flex 21 any way you want with optional light kits and specialized bedknives, groomers, brushes and rollers to meet your needs.
- Debris Products—A host of new debris products are now available under the Toro brand, following the acquisition of Goossen Products. Look for the Toro Versa-Vac and several new blowers for your debris management needs.

TORO**Count on it.**

We Appreciate Your Feedback

If you have any questions, comments or suggestions, contact toroadvantage@toro.com or fax 952.887.8693. Send us your ideas for future topics or tell us what you think about this issue. We hope to hear from you soon.

Send Address Changes to:

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New Services

TORO**Financing**

Introducing Toro Financing

Enhanced Financial Solutions for Acquiring Equipment and Irrigation Systems

Toro commercial turf equipment and irrigation systems can now be acquired in one easy step with Toro Financing. Offered in partnership with GE Capital Vendor Financial Services, Toro Financing makes obtaining the products you want even easier.

You can choose the solution that best meets your needs:

- Conditional Sales Contracts
- Leases
- Seasonal Skip Payment Plans
- Municipal Financing and Leasing

Irrigation systems including pipe, wire and labor costs can be financed by courses with the required credit rating using conditional sales contracts.

"We're excited to be bringing financial solutions to a new marketplace and are committed to providing flexible options to organizations managing landscapes with Toro equipment and irrigation systems," said Jim Kelly, Senior Vice President /General Manager of GE Capital Vendor Financial Services. "We're bringing our superior customer service, vast resources and financial expertise to Toro Financing to help Toro better serve their customers."

"We're pleased to be able to extend these financial offerings to irrigation systems," said Bill Hughes, Vice President/General Manager at Toro. "A golf course can renovate its irrigation system and get equipment to for its fleet in one transaction from one manufacturer. That's unprecedented."

Initially, Toro Financing will be available to golf courses, municipalities, schools, universities, sports organizations and others who purchase commercial turf maintenance equipment and irrigation systems in the United States.



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TORO

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