

"In the bigger picture, isn't what we do really just making sure that one more piece of a customer's American Dream is picture perfect?"

"And thanks to Lebanon quality, we do it quite well."



John Nugent, Lawn Medic, Inc., Bergen, NY

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Trying to keep up with our traction advantages is wearing the other guys out

thers try. But most traction-assist systems just don't cut it. Not when compared to a John Deere front mower.

In fact, components on other mowers actually wear out faster simply trying to do what John Deere's differential lock and hydraulic weight transfer systems do so easily.

NO BOUNCING DECK

Springs are the key components in many weight transfer systems.



But, if you've ever seen a kid on a rocking horse you know what springs do. They bounce.

One knob hydraulically transfers weight from the mower deck to the drive wheels on John Deere's F930, F932, and F935.

That's also what happens when you put springs on a mower deck. A side effect that's damaging to both deck components and quality of cut. John Deere's weight transfer system is better. Here, your mower



Trying to match the traction advantages of John Deere front mowers is hard on other machines.

deck doesn't bounce because there are no springs. Weight is hydraulically transferred to the drive wheels by simply turning a knob on the right console.

You get better traction without sacrificing mowing quality. Best of all, it's all done on the move so you're always in control of changing conditions.

NO WORN-OUT BRAKES

A standard differential lock is the second major part of the system. Here, a touch of a pedal is all it takes to lock both drive wheels on the move. So, if one wheel slips, the other can still pull you through.

It's not a brake. There are no drums to heat up or wear out. It's a straight linkage in the axle that allows both wheels to turn at the

same speed.

A much more positive way to get through tough footing than what the others would have you do—ride your traction assist brake.

Why not save that for when you really need it?

NO LOST MOMENTUM

All told, you get a tremendous traction advantage with John Deere. The ability to use the differential lock and hydraulic weight transfer on the move means you work better on steep slopes, sidehills, and slick ground without losing valuable



A touch of a pedal locks both drive wheels on John Deere front mowers to help get you through difficult conditions.

Talk to your John Deere dealer today for more information on these superior machines. Or write John Deere, Dept. 956, Moline, IL 61265.

Nothing Runs Like a Deere





The increasing customer base for utility tractors means more attachments will be available in the coming years.

COMPACT TRACTORS HELP REDUCE COSTS

The versatility and flexibility of compact tractors make them ideal for budget-minded landscape managers.

by Ken Moehle

ncreasing numbers of landscaping and maintenance operations are finding compact utility tractors in the 18 to 35 horsepower range valuable additions to their mix of equipment. One key reason is the ability of compact tractors to provide added versatility and flexibility.

Like mid-sized utility tractors, compact tractors can operate an everincreasing list of attachments that mechanize hundreds of grounds care tasks.

Landscapers often purchase compact tractors because the versatile machines fit tight quarters and give more workers a productive, multi-

Ken Moehle is product manager with Tractors Case IH, Racine, Wisc.

purpose machine. However, once the tractors are in service, grounds care supervisors discover that compact tractors can simplify equipment management, control operating cost and reduce lifetime ownership costs.

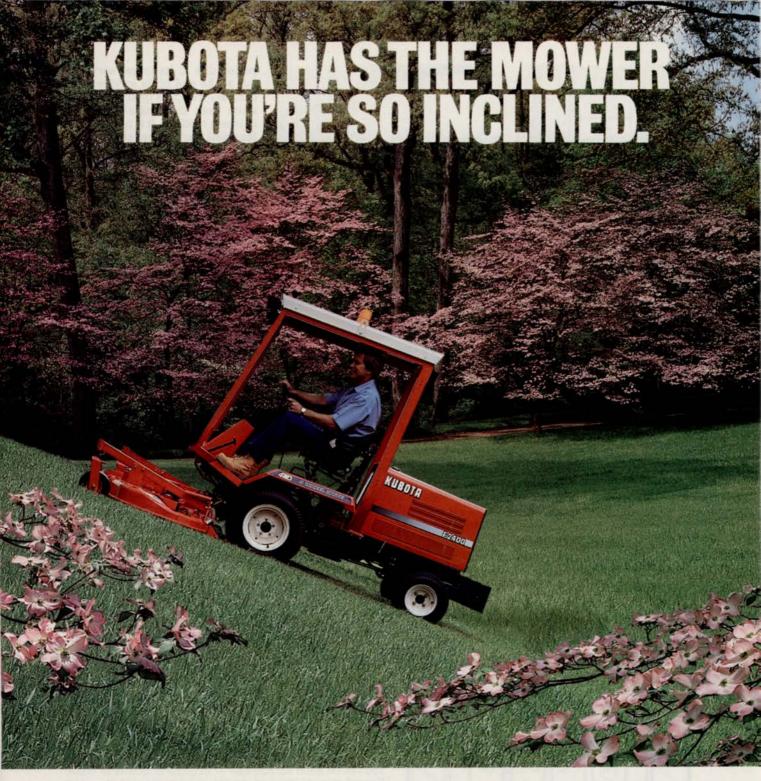
Operation and maintenance

When compared to selecting singlepurpose machines and maintaining an equipment fleet with diverse sizes and types of engines, compact tractors can help simplify servicing, repairs and managing supplies by:

• reducing the need to lease or buy and maintain a large inventory of single-purpose, self-powered machines;

 reducing the numbers of engine types and sizes to fuel, lubricate, service and maintain;

- improving the fuel efficiency of modern diesel engines in compact tractors, which compare favorably with the efficiency of smaller engines in single-purpose equipment;
- servicing skills, experience and tools are virtually identical to those for servicing mid-sized tractors, loader/backhoes, skid-steer loaders and similar diesel-powered equipment;
- the fact that many compact tractors are supported by large dealer networks servicing and selling other utility, construction and agricultural equipment;
- the likliehood that fuels, oils and hydraulic/transmission fluids are the same as those required by mid-sized tractors, loader/backhoes and other



It doesn't have to be an uphill grind. Not with Kubota's F2400 Front Mower. Four-wheel drive delivers traction where you need it most—on uneven, slick or damp ground. No more wheel-spinning means no more turf damage.

If you're up against one tough obstacle course, there's rear-wheel steering and independent brakes. Together, they provide the tightest possible turning radius.

Then for your mowing comfort, there's our famous clutchless hydrostatic transmission, as well as power steering and tilt-wheel.

Attachments? You can choose from a 60" or 72" rotary mower, a flail mower, rotary broom, front blade or snowblower. Even a grass catcher with 60" and 72" dumping heights. Of course, they're all lifted hydraulically. Effortlessly.

And its powerful, economical

24hp diesel engine will leave you wondering why anyone would own anything less. So if you've got the inclination, just write for our free Grounds Maintenance Equipment Guide at Kubota Tractor Corporation, P.O. Box 7020-A, Compton, CA 90224-7020.



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An example of vehicle flexibility is Kubota Tractor Corporation's R400, which is suitable for both commercial and industrial use.

equipment commonly found in grounds-care fleets;

• the engineering of engine, hydraulics, hitch and PTO, which are built to accommodate a wide range of demanding applications. Therefore, these components have longer life than similar components on many single-purpose machines, and

• longer service life, which reduces total operating costs of compact tractor systems which compare favorably with costs of single-purpose machines.

Resale and trade-in value

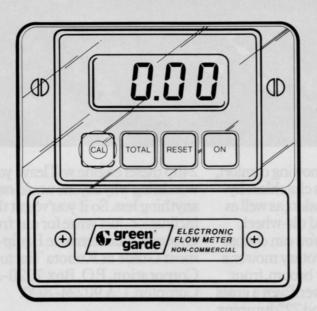
Not only is the cost of a compact tractor system amortized over a greater period due to its longer service life, but at the end of its service life, the compact tractor is typically worth far more than the single-purpose machines it replaces. It is not uncommon for small tractors that are decades old and properly maintained to sell for more than their original purchase price.

The many markets for compact tractors, including agriculture, industry, homeowners and contractors, make them valuable items in all regions. When the high resale value of the compact tractor is taken into account, the lifetime cost of choosing the compact tractor system for landscape management work becomes extremely competitive with the lifetime costs of single-purpose mowers, snow removal machines and other equipment choices.

Compact tractors are now a wellestablished part of the equipment marketplace. The large customer base means the choice of attachments to purchase or rent will continue to increase and future parts and service availability is assured. These conditions allow the landscape manager to be confident that purchasing or leasing compact tractors is economical as well as productive and efficient. LM

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NOVEMBER 1988/LANDSCAPE MANAGEMENT 37







How do you train applicators to spray...on target?

Keeping sprays on target requires a lot of knowledge and skill. That's why applicator training is vital. An unskilled applicator who sprays off target wastes time and increases fuel and material costs. Weather conditions or a poorly calibrated sprayer could result in environmentally unsound pesticide use.

This year, improve accuracy of pesticide application by learning how to spray trees the right way.

The National Arborist Association (NAA) has available three educational videotape programs on pesticide application and sprayer calibration.

Each program is designed to increase applicator knowledge of spraying and spraying techniques. No other training program on tree spraying is currently available. Program videotapes cover **Sprayer Operation**, **Sprayer Calibration** and **Application Techniques**. A calibration manual is included with each order.

Videotape programs provide the beginning applicator with a basic understanding of spraying trees. They also help the more experienced operator solve mechanical and spray problems that regularly occur on the job.

The **On Target** series is available only as a set of three videotapes. It is made possible by voluntary contributions of NAA active and associate members. Cost for the set and calibration manual is \$300.00. Because of their prior contributions, NAA members may purchase the set for \$150.00.

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See the Plow People at Ditch Witch

To put cable or pipe in the ground without digging trench, there's one *best* source for equipment that can get the job done right... Ditch Witch. You can find more plow models in more different sizes at Ditch Witch, and they outperform all other brands. Here's why:

More Force To Do More Work

Ditch Witch plows get more work done. The dry vibrator design of Ditch Witch plows

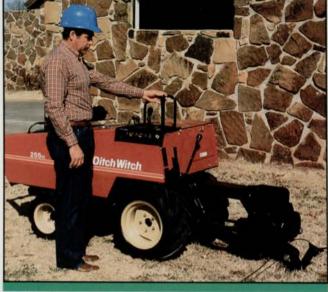


The Ditch Witch model 6510 equipped with the exclusive fiber optics cable handling system.

develops more breakout force than oil bath vibrators, because the weights don't turn in oil. That means available horsepower isn't wasted. The Ditch Witch dry vibrator won't overheat, and that's important when the going is tough.

Effective Weight Transfer

Ditch Witch uses the earth's natural resistance to the plow blade to increase plowing efficiency. Nonparallel plow linkage transfers the force of this resistance to the front wheels, giving a Ditch Witch plow the traction and pulling power of a machine that weighs as much as 50 percent more. That means you can work effectively in tough conditions where other brands have trouble.



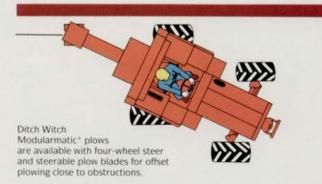
Ditch Witch vibratory plows are designed to optimize weight distribution for better traction and more plowing production.

Built to Last

The Ditch Witch unitrolly plow frame has the structural strength to hold up under the extreme forces developed during plowing—even in difficult conditions. The frame and vibrator are one piece, so they can't come unbolted from each other.

Offset Plowing

Plowing-in cable along a road or next to an obstruction can be done by offsetting a Ditch Witch plow. Effective offset plowing is possible because of independent four-wheel steering and rigid one-piece frame. The



combination of crab steer configuration and offset blade allows the wheels and blade to travel in the same direction, while the rigid frame holds everything in position. Only Ditch Witch has plows with offset capability in compact units down to the 35-HP-class.

A Blade for Every Job

Feed blades for cable, pull blades for pipe. Blades with the bend radius to safely accommodate television and fiber optic cable. Ditch Witch has the right blade for every job. Edge Series blades are the most durable you can buy and have special features for protecting cable.



The compact Ditch Witch model 350sx is ideal for plowing in plastic pipe. as well as cable

Versatility

Ditch Witch builds plows from 10-HP-class through 100-HP-class for bringing service from the street to the house, or for making installations from town to town. Power and communications cable installations, residential and commercial sprinkler systems, natural gas and water distribution lines - these jobs and more are being done every day with Ditch Witch vibratory plows. Ditch Witch designed and introduced the first system for safely handling fiber optic cable during plowing. As new technology develops, you can be sure Ditch Witch will have the equipment ready.



A wide range of modules and accessories make Ditch Witch plows even





Equipment Made for People.

The needs of the operator are a key element in the design of every Ditch Witch plow. The operator's station allows good visibility. Gauges and controls are easy to see and use. Ditch Witch even thinks there's nothing wrong with allowing the operator to work in relative comfort. A comfortable operator can be a more productive operator.

Dealer Know-How

No one knows more about vibratory plowing than your Ditch Witch dealer, and he's ready to share what he knows. That's why many people believe the Ditch Witch dealer is the best reason for using Ditch Witch vibratory plows. Underground construction isn't a sideline for him. He knows his product line and the conditions in your area. He has a staff of experts committed to keeping your equipment on the job. He also stocks a complete parts inventory.

Ditch Witch is Best!

The best-designed vibratory plows available. The most versatile, widest selection of models available. Equipment backed by a knowledgeable dealer organization. No wonder more people are using Ditch Witch vibratory plows than any other brand!

Find out more with a demonstration. Turn

The Ditch Witch dealers in your region sponsoring this message are listed below.

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Ditch Witch of Pennsylvania Rt.100 & Little Conestoga Rd. Eagle, Pennsylvania 19480 (215) 458-8282 Ditch Witch of Lake Erie 5034 Buffalo Road Erie, Pennsylvania 16510 (814) 899-0629

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Ditch Witch of Roanoke, Inc. 251 Wildwood Rd. Salem, Virginia 24153 (703) 387-0429



NAILING THE CULPRIT

With an efficient equipment tracking system, those lost and broken hand tools swiftly become a thing of the past.

by Jay Holtzman, contributing editor

ven the smallest landscape company or golf course can easily have tens of thousands of dollars tied up in equipment.

Because of this, virtually all landscape managers and golf course superintendents must come up with a system to track the use—and sometimes abuse—of their equipment.

Beyond being able to accurately track daily use of equipment, such equipment control systems can range from simple to elaborate, from informal to rigidly structured.

Keeping it simple

An informal system works best for The Caretakers of Egan, Minn. According to president Thomas Mann, "We don't have a lot of crews running in all directions, nor do we have the variety of equipment some contractors have." That's because of the size and nature of the business: specialization in maintenance of commercial and industrial properties with no design work.

Yet even with a fairly specialized business, Mann has more than \$150,000 worth of equipment, including a variety of front-mount and bellymount equipment, walk-behind mowers, various hand tools and small power tools such as chain saws and

"Each mowing crew has a base line of equipment that it needs every day, and every truck has a complete set of that equipment," Mann says. "The crews get their mowers and tractors for the day each morning and they must return them each evening, but there is no formal check-out system. We're small enough that abuse or loss of the equipment isn't a problem for us. We've talked about putting in a more formal system, but we just haven't gotten around to it."

Informal ways to track equipment, however, work well for him.

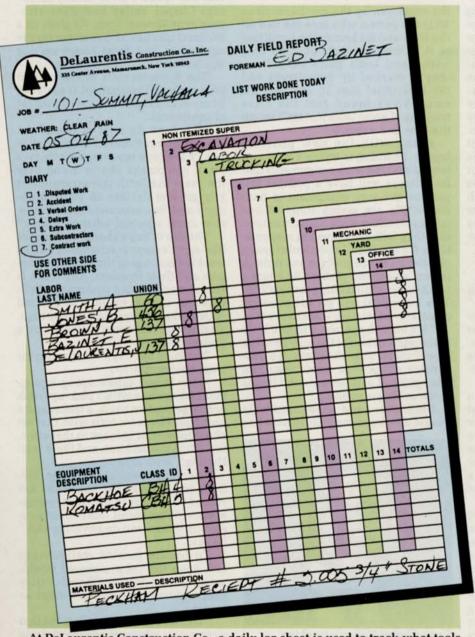
"One of the things we did to quickly check for missing equipment was to install tool racks on the back of each truck for the shovels, rakes and so on, so that with a quick glance you can see if the truck is fully equipped with the tools they need to lug around every day," Mann explains. "But for the most part, we have steady long-term employees, so we haven't had a problem with theft or equipment abuse."

Getting sophisticated

Even large, sophisticated tracking systems such as the one operated by DeLaurentis Construction of Mamaroneck, NY, still depend to some degree on the cooperation and goodwill of employees.

"We have a lot of people who have been with us for a long time—they're like family—and they look out for our interests," says Mary DeLaurentis.

Every piece of equipment has a use file, she explains: when in use, for how long, all maintenance and repairs. "All equipment appears on an equipment list with a code number for each piece. The code number is also inscribed on the tool, and this number is recorded each day that a tool is used. A daily charge is made at a specific hourly rate to every job for each



At DeLaurentis Construction Co., a daily log sheet is used to track what tools are signed out to whom each day. That employee is responsible for returning it in good condition.

piece of equipment used on that job."

A fleet manager is responsible for the more than 40 pieces of large equipment the company operates. Another manager is responsible for the daily assignment of smaller power equipment (up to and including equipment the size of backhoes) and hand tools.

Tools are signed out each day to an individual who is responsible for that tool and responsible for returning it in good condition at the end of the day. For convenience and efficiency, small tools are kept in trailers at various job sites, but the individual is still responsible for them. Drivers are responsible for all the equipment on their trucks.

This careful paperwork system is backed up by monthly meetings with

employees.

"Every month, we have a meeting of all the people who take out equipment. We review what has gone on during the previous month and discuss any cases of misuse or vandalism," DeLaurentis explains. "The bottom line is that we are a family-operated company and everyone knows that if there is a problem they will have to answer to the main man.

"Pilferage or misuse of equipment was a problem years ago when we were smaller and growing. We got notes from employees that so-and-so had built a house on our time and with our materials. But that isn't the case any more. With our system and family operation of the business, we have good control of it now."

Avoiding congestion

"The tool thing can get away from you quickly if you don't have control," says Kevin Downing, development director of Willoughby Golf Club, a new 18-hole residential club in Stuart, Fla. "In this new development, we have gone to a tighter system for better control.

"Before coming here, I sat down with my assistant and we looked at what we were doing and asked how we could do it better. Any problem we had with equipment was with smaller items worth \$300 or less—string trimmers, that type of thing. So we put in a new tool system here and designed the building to accommodate it."

Storage areas for power tools and hand tools are at opposite ends of the new building. "We have a line of demarcation between where someone goes to pick up a power tool and where he goes to pick up a hand tool," Downing says. This cuts congestion in the morning when crews are drawing their equipment for the day and also reduces the opportunities for workers to loiter where tools are kept.

"All power tools are checked out to



Mann: His smaller company uses an informal system to track equipment use and performance.

the employee by the mechanic since he is the person who sees the tool all the time and he knows the condition of it," Downing explains. "We deal with hand tools more casually—they're marked by department and the individual goes in and gets his own. We've found that the close tracking of hand tools just isn't worth the time and expense."

Along with the new physical layout, Downing is trying a new system for making work assignments that he believes will have a positive impact on the way equipment is handled. "We are giving some of our people standing work assignments so that they will have ongoing responsibility for a 'station,' a particular group of holes on the course, for example. A person will spend perhaps 24 hours a week on his station doing routine jobs. This individual will get the same set of tools for his station work every day.

"We hope the person will be a little more responsible for the way he takes care of them. This also gives us a convenient check—we know who had what piece of equipment—and it cuts down on finger pointing."

Contractors and superintendents should also keep good equipment use



Rom: Chapel Valley's tracking system includes a bonus program tied into equipment condition.

records for their own protection in case of lawsuits, Downing points out.

"You need some kind of system so that if an employee or former employee comes back and sues the company because he claims he was injured while using a particular piece of equipment, you can look back at your records and see, in fact, what that person was working with," says Downing.

Color-coding tools

Probably the most effective system is one that combines firm control of equipment with strong employee motivation. Like the system at Chapel Valley Landscape of Woodbine, Md.

"We put a lot of effort into our system and spend a lot of money on it," says Chapel Valley executive vicepresident Stewart Rom. "It gives us a minimal amount of downtime on the equipment and great image on our equipment."

The fundamentals of the system are simple: all equipment is assigned by crew, and each crew has its own set

of equipment.

"We don't do a lot of in-and-out sharing of equipment," Rom continues. "Each crew operates with its own set of equipment. We've found over the years that with this arrangement you get less damage to your equipment and less argument and discussion about who did what to whom."

The use of some shared equipment like earth augers is scheduled during weekly meetings of the project managers and their foremen. And there is also some check-out equipment, Rom explains, such as chain saws and sod cutters, that are kept in a locked cage. That equipment must be issued by a project manager.

The same basic system operates for

large equipment, too.

"Our larger landscaping equipment we operate with a pick-up truck or a large tandem truck, a trailer and a backhoe. The crew rolls with that set of equipment, it belongs to that crew, including the backhoe, and there is no sharing," Rom says.

The equipment lasts longer, too. Rom has found that backhoes are ruined with more than one or two operators. "You spend more money repairing it than you do anything else,"

he savs.

To handle routine maintenance and keep the crew-assigned equipment system intact, Chapel Valley keeps entire sets of equipment as spares.

"We have rotation equipment that a crew uses when we service their rig for preventive maintenance purposes. They trade off the whole rig, leaving