

Do's and Don'ts for Safely Operating Mini and Compact Skid Steers and Loaders

Rick Howland



Mini and compact skid steers and loaders have helped to get big-time muscle into some tight spaces. But one has to be respectful of these mighty midgets to operate them safely. Shown here is the Ditch Witch SK3000 stand-on tracked loader. Photo courtesy of Ditch Witch. »

What a godsend the mini and compact skid steers and loaders are! These small packages have helped to get big-time muscle into some tight spaces. They have sped up jobs. They have taken a lot of manual labor out of tree care. And, speaking of labor, manufacturers point to how they can offset the growing shortage of skilled and unskilled labor and lengthen the careers of experienced pros along the way.

However, as they grow in importance in the tree care industry, it is important that mini and compact skid steers and loaders be respected for what they can do and what they should not do.



"It is important with minis and compacts to know the location of power lines and underground utilities. The operator has to be cognizant of that and has to call the dig hotline if they have to dig," says Boxer's Casey Gross. Photo courtesy of Boxer Equipment. »

According to Casey Gross, tree care product sales manager for Morbark, which offers the Boxer brand, "One of their biggest advantages is getting into tight areas, specifically through a standard 36-inch-wide gate, where standard skid steers cannot. Thus they become an extremely useful tool for tree care, for example, in getting to a backyard to drag logs and debris out front to be loaded onto a truck."

He adds that, "With a hundred attachments including grapples, brush buckets and forks, you have all the things you need to get the job done instead of using hand labor to get a take-down to the roadside."

"Let's face it," Casey admits, "we sometimes have a hard time in our industry getting qualified people." To the rescue have come the mini skid steers and compact loaders. "They have been so successful because now you can have one operator do the job of two or three crew members, dragging brush and logs and debris for disposal. That's a big part of the tree care business," he notes. "Plus, with the attachments, not only can a business owner get more done, now he or she can do more and different jobs, and that versatility adds to the bottom line. You can put on augers and trenchers and things you might not think about on a tree job, but a customer may want you to plant a new tree. There are even tree-spade attachments for that. Think about it, with a 36-inch auger you can put in a power line."

But, Casey warns, and this is a big "but," one has to be respectful of these mighty midgets.

"The first thing we tell people is to use common sense – read and understand the manual and safety procedures," he says. "And train your people based on that information. Part of that training is that you want only qualified people to use the machine.

"We train people not to carry passengers anywhere on the machine. It is designed for one operator on the end of the machine," he stresses. "And wear proper PPE (personal protective equipment)," Casey says unequivocally.

Stop and look around, Casey says. "It is important with minis and compacts to know the location of power lines and underground utilities. The operator has to be cognizant of that and has to call the dig hotline if they have to dig.

"When lifting heavy material, keep the attachment and load low to the ground. These machines can be tippy," he says, pointing to the fact that they are small and narrow.

"Do not drive across steep inclines," he warns. "You want to go up and down.

"Use the handrails on the operator platform and keep a firm grip to keep from falling off," he says. "Make sure of your surroundings as you work. Watch out for soft and uneven ground conditions. You do not want the ground to give way beneath the machine.



Keep the load low and slow for greater stability, as low as possible and as slow as necessary with respect to the terrain. Shown here is a Worky-Quad SSK15 loader. Photo courtesy of Branch Manager Attachments. »

“And never exceed the machine’s stated weight capacity. Read and follow the instructions,” he repeats. Overloading also has a long-term hidden threat, he maintains. “Your machine can develop premature stress cracks and wear anywhere – the boom, cylinders, lift cylinder. Absolutely understand the machine’s capacity.

“And do not park on a slope.”

In concluding, Casey notes that the Boxer 700HDX is the most popular of the Morbark Boxer machines among tree care companies because, while it is stout, it still can pass through a 36-inch gate. Casey points out, “The machine features tracks that can expand from 35 to 43 inches. We recommend using the widest (setting) for stability.”

Dave Nordgaard, a tree care professional and president of Branch Manager Attachments, is a big fan of the minis and maintains with pride that he was one of the first proponents of the technology. Getting right to the point of being a good steward of the technology, he says, "The first thing is to keep the load low and slow for greater stability, as low as possible and as slow as necessary with respect to the terrain.

"It's important to understand weight. Most of these machines are weighted in the rear to counter the weight they will be leveraging in the front," he explains. "The rule of thumb is to lead with the weight – in the front if carrying a load, or the counterweight in the rear if running empty – for greater stability when driving uphill or downhill."

As Nordgaard explains it, the reason to avoid traveling laterally across a hill and to lead with the load is that, "the heaviest part of the machine tends to shift to the downhill side," and the shift can cause the machine to tip over, depending on the slope of the hill. The greater the slope, the greater the possibility of instability, according to Nordgaard. "This can get pretty technical," he observes, "and some machines will come with documentation as to what angle you can traverse a hill sideways.

"A lot of that, too, depends on ground condition and vegetation," he says, which can not only hide uneven spots and dangerous ruts but also slippery spots that can add to the tip-over danger. He reports one incident in which an operator rolled a machine over into a ditch covered with leaves that had obscured the depression.

Nordgaard reminds us that much of this kind of information is contained in the owner's manual.



There's a lot going on in this photo, says John Welch of Crawford Tree & Landscape Services. First, note the aggressive winter tires on the plywood, which minimizes damage to a client's property when soft turf is encountered. Second, the operator is backing up to avoid unnecessary, repetitive turns, again to protect the property. Not shown is a crew member whose job is to control the infeed of material to prevent the loader from being accidentally drawn into the chipper. Note the small material bucket on the ground, used to clear snow and ice in winter, which is then replaced by the rotating grapple. Photo courtesy of Crawford Tree & Landscape. »

Jon Welch, president of Crawford Tree & Landscape Services, Inc., an accredited TCIA member company based in Milwaukee, Wisconsin, is a customer of Branch Manager Attachments and says his company's experience with the compact technology over the past couple of years qualifies it as a bit of a poster child. Crawford Tree utilizes both Toro and Giant machines.

He says, for example, "For the Giant, we have a couple of power rotating grapples for picking up logs and brush and have been using them for about a year, and we find they can significantly increase the career longevity of the field staff."

That's a critical benefit for Welch, whose company's approach is to be a people company first. "Profit follows," Welch maintains. "There were many reasons we purchased these machines. The prime benefit was not to make money – that is a side benefit. We find that this approach is more efficient with recruiting, retention and career longevity. Additionally, these machines reduce wear and tear not only on the crew but also on customers' properties."

With regard to "do's," Welch says the biggest thing is training. "That sounds like a cliché, but it's true. Make sure training is comprehensive and prioritized and legitimized by the leadership of the company," he states, explaining that such an approach delivers the message of its importance to the team.

"The biggest consideration for training is that these small machines maneuver very differently from a standard large loader. If you use the compact machines the same way you use the large ones, you

will tip them over, guaranteed," Welch says.

"We start all our training in (Microsoft) PowerPoint. That way you prepare and deliver content that has been filtered and vetted and that is complete and consistent from class to class. Then we have our class interact and go to the shop to physically touch the equipment.

"After training, we test on the equipment. We've created a test our operators have to pass," Welch states. "This includes memorizing the machine's capability, demonstrating knowledge on how to navigate and showing proficiency in loading logs and brush." Training is a combination of classroom and one-on-one, according to Welch.

"All personnel using these machines have to pass the test and be signed off by our safety coordinator and mechanic. Not everyone passes the first time, and they go through the program again until they do. It might be easy to say 'OK' and move on, but because of our company principles and to legitimize the training, we do not do that." He reports that one person took six months to be trained and successfully tested.

So, he says, "Don't rush your team into it. Don't send the message that the equipment is there just to get the job done faster.

"Do inspect regularly," he says. For example, "These machines trailer differently. They are not to be wrapped with chains as a large loader traditionally would be. Plus, these machines need to be driven up and down trailer ramps in specific directions or they risk tipping over, and they need to be strapped down in a specific way," Welch warns. He says he's seen situations where a worker gets creative in the loading and lash-down in an effort to save time or space, adding, "That can be a detriment." The key? "Inspection," Welch repeats.

Another unexpected "don't" was, "With mini and compact loaders and skid steers, don't schedule your crew as you would with other traditional-size machines. First, the machines do not reach as high nor carry as large a load," he says, suggesting the larger machine may be a better alternative in some cases. "The smaller machines will save you time in some areas, but in others, you may have to make more cuts to reduce material size before you can lift it."

Unlike enclosed large loaders and skid steers, Welch says, "We find with both of our machines, crews are out in the elements more. They can get cold, so we want to rotate staff. This is just one example of why we need to be cognizant of what makes the smaller machines unique."

His advice, from purchase to day-to-day use, is to "train ... test ... inspect ... and give it time."

According to Welch, "This is our second winter with these two loaders and power grapples." Last winter, he says, was largely training, testing and inspection. "This year, we are crushing it. Last year, not so much."



Using a log grapple to lift materials and feed chippers will save wear on the bodies of many workers over their lives. But use caution on hills. "If you use the compact machines the same way you use the large ones, you will tip them over, guaranteed," says John Welch. Photo courtesy of Vermeer. »

Brett Newendorp, landscape market manager at Vermeer, says, the company's mini skid steer line includes five models: S450TX, S925TX, CTX50, CTX100 and CTX160. "The CTX160, the newest model from Vermeer, is designed for the arborist looking to carry heavier materials while maintaining a smaller and lighter footprint.

"Not long ago, larger crews were required to move materials around a job site and feed chippers. Today, mechanization is becoming a viable alternative as the labor market has tightened and contractors look to grow and expand their businesses," says Newendorp. "Using a log grapple to lift materials and feed chippers will save wear on the bodies of many workers over their lives. With the

many attachment offerings, it can allow a tree care business to think about expanding its business offerings into areas like brush cutting, general landscaping and snow removal.”

But these advantages come with some warning.

“It is paramount that operators are trained and follow all safe operating procedures when operating a mini skid steer. Carry the load as low as possible and know the limits of the machine in order to get the full life and full use out of your mini skid steer. Using both the machine and attachments for their intended use will give contractors confidence in the safety of their operators and show customers the integrity of their business.”

Newendorp points out that, “Every Vermeer mini skid steer has a single lift point, so a larger machine (such as a crane) can lift the machine into a backyard or onto a job site. As more tree care contractors utilize cranes for complete takedowns, this can be very helpful in getting a loader into an area it could not travel to over the ground.”

Seth Matthesen, Ditch Witch category manager, says, “We offer five SK models in our family of stand-on skid steers, all ranging in size and power. The smallest of the group is the SK600, which is designed for small-scale landscape and irrigation jobs and, at only 33.5 inches wide, can easily fit through backyard gates. We also offer an SK800, SK1050, SK1550 and our largest and most recent stand-on skid steer, the SK3000, a full-size, stand-on unit,” that allows the operator a 360-degree view of the job site.

“Our customers tell us they like the 360-degree visibility of our stand-on units. Being able to have clear visibility in all directions makes a world of difference for SK operators. The easy-on, easy-off operator platform with integrated suspension enhances operator comfort and greatly reduces the risks associated with climbing over the attachment and in and out of the cab on traditional units.

“Having a clear understanding of the machine and the attachments’ capabilities is essential for safety, functionality and longevity of the equipment,” Matthesen says. “Operators should always refer to the owner’s manual to ensure the tasks they are completing are within the specifications of the machine.”

With regard to do’s and don’ts, Matthesen points out that there are some that are machine specific, others that are more universal. For example:

- switch on the self-level function when doing pallet work or when your load needs to stay level or at a certain angle.
- maintain your machine according to instructions included in the operator’s manual.
- operate the machine without safety glasses or PPE.
- pair the machine with attachments that are either too big or too small for the machine. If the attachments are too small, the attachment might break. If the attachments are too big, operating

capacity could be decreased.

- forget to use safety chains when transporting the machine from job site to job site. (D-rings on the side of the Ditch Witch machines' tracks offer an easier way to anchor the machine.)

Mini loaders and skid steers can pack a lot of work into a small package. Adhering to some do's and don'ts will help keep you safe and help you get a lot more out of the machine.



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