

Mower rehabilitation for quick spring starts

Don't just park 'em and leave 'em. Now's the time to get your mower fleet ready for storage, and ready for spring.

■ It's the end of the season. Your crews did great work. The company made a healthy profit. There were minimal accidents, and no lawsuits (??).

Time to relax, right?

Only if you've seen to it that the mower fleet has been stowed properly. If so, you should be able to press it into action in case of an early spring—say, February.

Mower rehabilitation is probably the most important equipment duty you can practice, if you want to start this year with minimal hassles and expense. And as an extra incentive, take a moment to tally up your total investment in equipment.

Some might be content to just stow their mowers away. If it's not being used, what can happen, right?

Three months in cold storage can cause plenty to happen if you don't get that machine prepped for hibernation. Here's what some industry experts told **LANDSCAPE MANAGEMENT** about mower



Radcliff: Use only specified oil to prevent "engine death."

rehabilitation, A to Z.

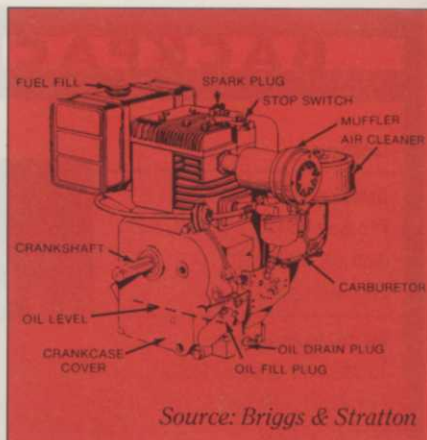
Dave Buchanan, Jacobsen: Look at the blades. A dull blade is going to use more power. It might be a good idea to store blades in a climate controlled area.

If you're anxious to get out there (in spring) you might want them sharpened and balanced beforehand. Balance has a lot to do with keeping vibration off the operation of the machine. It's simple, and will save you from headaches down the road.

Tom Kane, national training manager, Kubota Tractor Corp.:

● Condensation can be a significant hazard to a diesel tractor during the winter. After draining, prime the fuel system and purge the air. Run for at least 10 minutes under a light load so that protective oil will circulate throughout the entire fuel system. If the tractor is going to set for an extended period, repeat at six-month intervals.

● Check engine gaskets. Leaking or worn seals can admit contaminants.



Source: Briggs & Stratton

● If the tractor operates with an attached mower, inspect the mower for oil leaks. Remove and sharpen the blade, and clean deck underside. Clean the air filter and reinstall it correctly.

Bruce Radcliff, instructor for Briggs & Stratton's customer education department: The main mistake people make is not draining the gasoline.

There is a volatility change. Gasoline blended in September has a different volatility rate (which is how fast that liquid becomes a gas). If you use summer gas in the winter time, that summer gas will be "depressed" and doesn't become nearly as volatile. Even if you start the engine up in the fall, you need to drain the fuel again and put in current fuel.

Paul Scholten, manager of service and technical publications, Kohler Co.:

● Add a gasoline stabilizer in the fall. This eliminates the need for draining the gas tank.

● Add the proper amount of new oil, using the specified oil weight.

● Remove the spark plug and replace with a new one. In the fall, drop a tablespoon of motor oil into the cylinder. Manually crank the engine several times to help coat the cylinder walls and protect them from water and condensation.

● Remove and clean the air filter per owner's manual instructions.

● Clean the battery terminals. Make sure the battery is charged and have it tested, if necessary.

Bob Tracinski, John Deere: He suggests that for Deere mowers, use Deere's gasoline storage stabilizer or an equivalent. Follow label directions. Also:

● Replace the spark plug, but leave plug wire disconnected.

● Lubricate the rear axle bearings and wheel bearings.

● Close the fuel shutoff valve.

● Do not store mower with fuel in tank in a building where fumes may reach an open flame or spark.



Harry, right, and Larry Carpenter of The State Street Saw Shop, Salem, Ore.: Let the pros handle the big engine tear-downs.

Are rebuilds necessary?—Once a year or sometimes more often, you can do a 'power tune-up,' Radcliff advises. This consists of simply removing the cylinder heads, cleaning out carbon, and making all the basic adjustments to make sure the engine is performing at its maximum. A lot of rebuilds can be saved by simple, basic maintenance.

Let the pros do it—"I don't see any reason for an untrained person to do any more



Attendance at engine seminars gives crews engine know-how.

than remove the cylinder head of an engine," says Radcliff. "Taking a sump or side cover off to look inside of the engine will usually bring more trouble than good. Engines are becoming more and more complex as time goes on. Things that even dealers have to refer to manuals about certainly shouldn't be in the hands of someone who hasn't even read the manual. You need the understanding of the physics of an engine."

Use the specified oil—"I cannot stress it enough," Radcliff says. "(Briggs & Stratton) changed oil recommendations to a straight 30-weight as opposed to multi-viscosity oil; typically you'll get much better oil consumption numbers than you do with multi-viscosity oils. They don't burn nearly as much. With emission controls and trying to make the engine last as long as possible, we want to make sure we use the right oil and change it at frequent intervals.

Radcliff calls wrong oil or bad oil, "Probably the number one cause of engine death."

—Terry McIver

More 'extended storage' tips:

✓ Wash, clean and completely lubricate the mower. Touch up scratched and unpainted areas, and wipe down all metallic surfaces with a medium weight (SAE 30) motor oil to prevent rust.

✓ Drain fuel from the fuel tank. After fuel is drained, start the engine and run it until the fuel in the carburetor is exhausted.

✓ Drain and change engine oil.

✓ Clean the tires and check tire pressure. Jack up the mower so the load is off the tires. Protect mower tires from sunlight.

✓ Store in a dry and protected place.

Source: The Bunton Co.

Calculating mowing costs

Don't forget to add in your desired profit margin when calculating what to charge the customer!

■ Figuring out how much it costs to mow a given area is not entirely dependent on the area's size, says Howard Mees of Environmental Care Inc., San Diego, Calif.

The service provider must also take into account site considerations, as well as equipment and labor costs.

Site considerations include things like areas that are too wet or over-fertilized; small, tight locations with a lot of detail; and so on. "Picking the right piece of equipment to get optimum performance in a given location will affect production," Mees explains. "If a 21-inch mower is used on a five-acre park, the cost per acre of cutting can be quite high."

Here is the procedure Mees uses to calculate his mowing costs per property.

Equipment costs—No matter what kind of mower you choose to use for par-



Mees: average cost is \$2.61

tical projects, you are still faced with the initial purchase cost of the machine. And once you've made the purchase, you must spend money to maintain that piece of equipment.

"There are not only the standard expenses of gas, oil and rubber goods, but also your preventive maintenance functions, as well as your shop time expense," notes Mees. "You also have parts, labor and downtime expense when your equipment is in for repairs."

There are also some hidden costs that you might not be figuring, says Mees. These might include:

- transporting the equipment to and from the job site;
- loading and unloading;
- time during the shift the equipment is not in use; and/or
- cost of back-up equipment.

"The above considerations have a dollar value that you can attach to them," Mees

says. "You can then see how many hours you actually are operating the machine and this will give you an equipment cost per hour to own and operate that machine."

Some average costs of operation—as provided by experience, conversations with other contractors Mees talked to, and input from manufacturers—are:

gas and oil	54 cents/hr.
repair	46 cents/hr.
cost of purchase	55 cents/hr.
vehicle operation	13 cents/hr.

"The average cost per hour, not allowing for the size of the equipment, is about \$2.61 without profit and overhead," notes Mees.

Operator costs—Next, you figure out how much you are paying the operator per hour, including downtime and benefits.

A formula for calculating this number can be found in the June, 1991 issue of this magazine, on pages 32-33. Typically, total operator costs run about 31 percent over base hourly wages. This figure includes statutory costs like FICA and worker's comp, and voluntary costs like insurance, retirement and uniforms.

Add together equipment costs and labor costs per hour and you get the cost per hour of mowing a particular area.

This, of course, is not *what you charge!*

Other costs—The average overhead, which comes from a study done by the Associated Landscape Contractors of