

Proper Use and Mis-Use of Equipment

By Ray Gerber

Most of the problems on equipment used for turf-grass maintenance, from time to time are usually the results of not having the proper information. This information is always available in your instruction manual that is received with each piece of equipment, but I dare say, in 90% of the cases, this manual is laid away and entirely forgotten. This manual is very important for the proper maintaining of this piece of equipment and should be read several times by all persons who are interested in equipment and then kept in a place where it can be easily found by any one. It should always be remembered that the manufacturer has spent thousands of dollars on research so as to give you a satisfactory piece of equipment. If for some reason you do not have a manual, ask him for one, he will be more than glad to take care of your request.

I would like to suggest that you keep a record sheet of each piece of equipment that you are using, whether it is a power mower, tractor, power sprayer or gang mowers, in order to maintain a check on your maintenance procedures. Probably the best way, is to number each piece of equipment and refer to them hereafter, by numbers, such as tractor #2 Power Mower #5, etc. This chart should be hung in a convenient place, so when the machine comes in the operator does not have to look for it. At this time, he should write down the number of hours the machines was used by him. This is the only way you will have of telling when it is time to change the oil in the crank case, lubricate the bearings or other moving parts, check the air filter, check the water in the battery, etc. As these operations are done on anyone particular machine, they should be checked off and the date when they were done, so that you, who are responsible for this equipment can refer to these charts and check the person whose duty it is to perform these operations.

Another important maintenance procedure is keeping your equipment clean. Most all equipment is so protected that it can be cleaned without damage to the bearings or seals.

Always keep motors clean. An accumulation of oil and dirt will cause a motor to overheat, cutting down on its efficiency and life. Never race a motor . . . its results, in time, will bring on costly repair bills. One of the more serious things, is using the wrong type of lubricant. Oil in motor crank cases, should be changed after the specified number of hours in use . . . recommended by the manufacturer. Refer to your manual for proper grade and quantity.

Proper lubrication should be used in all gear cases. When using too heavy a grease, it is almost impossible for the lubricant to work into the moving parts. Too heavy a grease, will usually cause channeling. What I mean by that, is . . . the gear that is supposed to pick up the grease, does no more than cut a channel. Should this occur, it will not give sufficient lubrication to other moving parts that were intended to be lubricated by the lubrication in the gear case. Too light an oil, will soon find its way out past the oil seals. The results are . . . it becomes necessary to check the amount of lubrication more often. If this is not done, serious damage could occur.

On certain pieces of equipment . . . if the manual

calls for a graphite grease for certain moving parts . . . by all means use it for best results.

Power sprayers should be cleaned thoroughly, immediately after using and especially after using caustic materials. Do not run a sprayer pump without water because certain moving parts are water lubricated.

When we see a piece of equipment being misused by the operator, we hate to think it is being done intentionally. My belief is . . . in most cases the operator has not received proper instructions and training.

One of the more serious problems is the speed in which the operator is operating a piece of mowing equipment. The speed depends on the type of machine that you are operating. The power mower, due to the fact that it has an engine on it, has certainly been abused. Again I would like to call your attention to your maintenance manual in regard to the proper speed . . . and I think that you will find that most power mowers are not designed and built to run with the throttle wide open, but at a good walking speed.

Whenever it becomes necessary to make any mechanical adjustments on a piece of equipment, it should be done by someone who has some mechanical ability. However, there are times when the operator must make his own. Should it become necessary to make an adjustment on a reel type mower, I am going to give you my version on a proper adjustment. First of all . . . great care should be taken. If not properly done, the reel and bed knife will be out of alignment. Should this occur, it may become necessary to regrind the reel and bed knife before it will give a satisfactory job of cutting. Never adjust the reel and bed knife too tight, just enough so the reel will barely touch the bottom knife all the way across. In fact, I would call it almost zero-zero. Should it be set too tight, it will cause premature wear, not only on the reel blades and the bottom knife, but it follows through the gears and bearings and on down to the traction wheels of the mower, the motor, and the entire tractor, should it be a tractor-drawn unit. It will require more gasoline and oil, and also will result in an overheated motor.

If the adjustment should become too loose, it will give an unsatisfactory cut, causing damage to the blades of grass. The blades will not be cutting, they will be pinching the grass. This loose adjustment will also cause the mower to become dull. As the grass is pinched off and drawn across the cutting edge of the fly knife and bottom blade, it will remove the sharp edge and will cause a rounding effect on these two surfaces. Should this occur, you will have to re-grind the mower either with emery and oil or on a grinder before it will cut satisfactorily.

One day as I was talking to a lawn mower dealer, whom most all of you know, I mentioned to him I was including my version of proper adjustment on reel type mowers. His reply was, "Do not tell them how you do it because that is bad for our bed knife sales." I imagine what he had in mind was the four and five years of wear or service I used to get from one edge of a fairway mower bottom knife. I feel if you are careful in making adjustments and try not to cut up the debris before it is picked up, you can get the same results.

The height of cut adjustment should be done very carefully. If the rear roller brackets are not set the same on both sides, trouble will soon arrive. If they

should be equipped with ball bearings and oil seals, the seal will soon start to wear uneven. When this happens, moisture will get into the bearings and in a short time they will start to rust. Should this occur, it is only a short time before it is necessary to replace the bearings and seals.

Great care should be taken not to run any mowing equipment, tractors or trucks over curbs, into deep ditches, into trees or posts, or into any type of fence. It is always worthwhile to police your areas where you travel and remove any sticks, stones, bottles, tin cans, or any debris lying around. Failure to do so usually bring on costly repair bills as well as loss of time. It is always more profitable to stop and remove the rubbish before running over it.

Many times as I was traveling around the country, I noticed beautiful trees which required many years to grow and a fair amount of money and care to get them in the beauty that I saw from a distance. After a closer observation I noticed on certain trees, they had been injured by a careless operator using a piece of equipment. When I say a careless operator, in a case of this kind, I can find no other word to use. He not only injured the tree, but certainly did no good to the equipment he was using.

We often find a nice piece of well maintained turf and many times in this fine turf as well as other places, damage done by wheel marks. The reason usually is engaging the clutch too quickly or trying to stop too quickly . . . sometimes making too short a turn on a hill when soil or turf is not in a condition for a short turn. At a time like this is when most damage is done. Damage to turf caused by the clutch being engaged too quickly can only be charged to one or two things. If it is due to a faulty clutch it should be repaired. If not, it is carelessness on the part of the operator. The same holds true by stopping too quickly . . . either the brakes grab or a careless operator.

Over loading trucks usually brings on costly repair bills, not only to the truck but also to roads or streets upon which it is driven. A truck is made to carry a certain weight and should not be expected to carry weight beyond the manufacturer's recommendations . . . for the same reason a fighter would not be expected to fight a man beyond his own weight. In other words, never send a boy to do a man's job.

When loading small fertilizer spreaders on or off a truck or trailer, it should be done with the greatest of care. Carelessness on the part of the employee will result in severe damage to the spreader board and wheels. Fertilizer spreaders both large and small should be cleaned thoroughly after each day of use, especially after using chemical fertilizers. After they have been thoroughly cleaned, all bearings and moving parts should be lubricated. Failure to do so will result in damage to the hopper and cause bearings to freeze.

Aerifying machines should always be operated with the greatest of care. Running over stones, sidewalks, roadways, sprinkler valves and any other hard objects will injure the spoons or spikes. Should this occur, it will be impossible to get a satisfactory job from the machine. In a case of this kind, there is no alternative other than replace the damaged spoons or spikes with new ones.

When operating a roto-tiller, one should always keep

in mind even though this machine is made for fairly rough use, there is a limit as to what it can do without ruining the machine. In fact, there is a limit toward using any piece of equipment and the operator should know where this limit is and stop before it is reached.

Driving over valves that are set just below the surface with a heavy load results many times in broken valves. We often find valves that are above the ground being broken. Everyone knows that accidents do happen but in most instances, it is due to carelessness.

Small tools, such as, shovels, rakes, sod lifters, wheelbarrows, etc. should receive the same careful attention as a more costly item. As we all know that many small repair bills will eventually add up to a large figure.

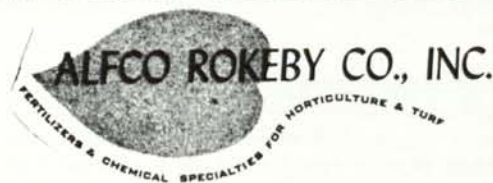
Fire is dangerous, we all know that, but many of us are careless around our equipment buildings. The loss of equipment from fire during a year is tremendous. We should never do any smoking near open gasoline cans or while filling a gas tank with gas or leave oily rags laying around. There are many other precautions one should keep in mind. It may not only save your equipment, it may save someone's life.

In many instances, some of us get a little careless either on the job or at our home or both places.

We always should remember we have a job to do and by cooperating with each other the task will be much easier. We live in the most grand country in the world. This was brought on by our forefathers, many years ago through their cooperation with one another. Let us do our part by helping thy neighbor.

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