

Are You in Control of Your Turf Equipment?

Are you in control of your turf equipment or is your equipment in control of you? How do you run your shop? Are you bringing your equipment in by choice for daily checks? Are machines lined up at your door when you come into work because of breakdowns? If you are chasing your equipment, it's probably because your maintenance is not up to par during the mowing season and waiting for winter to arrive. It doesn't have to be that way. I am a firm believer in preventive maintenance (PM). Having a good PM schedule will greatly reduce down time of equipment, which keeps the operator out mowing, the superintendent happy, gives you a little breathing room, and most of all, keeps your course looking great! There are excellent maintenance schedules for every machine and every engine. The manufacturers have invested time and money to develop these schedules. They should be followed in order to get the maximum life span and best results from your equipment. By following the manufacturers' recommended preventative maintenance service intervals, you'll achieve several things. You can be sure your engines and hydraulic systems will perform better and run longer. Engine oils begin to change in viscosity as contaminants are suspended in the oil. Friction is created and with friction comes heat, therefore causing engine overheating, causing the thinner additives of the engine oil to vaporize and be burned off in the engine. The lack of these additives reduces the oil's lubricating properties. Critical engine parts lacking proper lubrication result in premature engine wear and eventually catastrophic engine failure. This is not to say that engine wear will occur if you go over the recommended interval once or twice. It is the constant, consistent malpractice of preventive maintenance that causes excessive engine wear. Regular service intervals will keep oil at its optimum lubricating performance, allowing your engine to perform at its best for maximum longevity.



Inspecting hydraulic hoses for signs of wear is a key component of PM on a golf course.

Reels, bedknives, and rotary blades should be maintained on regular service intervals as well. Frequent sharpening and adjustment will enhance turf

Hydraulic systems can be somewhat deceiving, due to their nature. Pull the dipstick on an engine after fifty hours and the oil is black. Pull the dipstick on a hydraulic system and it looks like you just changed it. There are no by-products of combustion to contaminate the oil. However hydraulic oil gets a workout in other ways: constant heating and cooling of the hydraulic system, constant pressure changes, stresses of taxing a system to a point beyond relief, contamination by the introduction of fuel into the system, etc. Hydraulic oil that is used beyond the recommended service interval loses its ability to protect hydraulic components. Oil operating temperatures rise, oil viscosity changes, and less protection between moving parts occurs. The lack of protection between moving parts leads to more contamination, resulting in possible pump and motor failures. Excessive heat in the hydraulic system can cause aluminum valve blocks to expand or warp excessively, causing plugs to loosen, O-rings to tear, oil to leak, turf to die, etc. Bottom line—servicing your hydraulic systems at recommended intervals will save you from problems that do not need to exist. This saves time and money.

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conditions, with minimal effort from the machine. Roller and reel bearings should be checked for play, and greased on a regular schedule. The bearings should be replaced as conditions warrant. Ensuring that the adjustment screws, bolts, etc., are not seized greatly reduces the amount of effort, as well as the time, needed to make routine adjustments during the growing season. Replacing reels should be anticipated and scheduled before they reach the maximum wear limits. This will avoid the possibility of having to tear down cutting units mid-season. Bedknives should be replaced when they no longer meet OEM standards and can no longer be sharpened. Using alternate cutting units for topdressing greens is an efficient way of preserving the normal cutting units. This allows you to have a good set of units on hand at all times. It also gives you, the tech, the time to recondition your normal greens mowing units if needed.

Inspecting hydraulic hoses and replacing them before they burst is priceless. I know that all of us have had a hydraulic hose spring a leak at one time or another. It is the nature of the machine; the constant movement and flexing of these hoses causes them to burst when you least expect. Actively replacing hoses, espe-

cially when there is evidence of wear (abrasion, fraying, etc.), may help to eliminate these problems. One of the challenges we face, however, is that most hydraulic hoses today are covered with some type of wrap, making it next to impossible to see any external wear. The other challenge is the routing of these hydraulic hoses and lines—they are sometimes routed in such a way that you can not see any damage. To help combat the problem of hydraulic leaks on your turf, it is recommended that you replace hoses on a service interval every two years. This, of course, depends on the machine's hours of usage, and is recommended for those hoses that have movement and flex. Replacing hoses at regular intervals will help to reduce, if not eliminate, the chances of hydraulic leak.

Electrical systems need preventative maintenance as well. Operation of safety interlock switches and warning lights needs your constant attention. Switches that are found faulty should be replaced immediately. Warning lights that do not light when the key is on (engine not running) indicate that there is a problem. This should be investigated further and repaired. Batteries and their cables that supply the unit with power should be inspected for corro-

sion and proper connections. Bad or dirty connections can cause intermittent problems and can cause you much frustration. The use of universal replacement battery terminals that you cut off the old terminal and place on the new terminal, using a clamp-type system, is good for a quick repair to get a machine up and running. However this repair should only be temporary and should be replaced with a complete new cable when time permits.

Keep good, detailed, organized records of all work done and parts used to complete the job for each machine. This will help track costs of maintaining each unit as well as evaluate the condition of your equipment. Creating a work order is a good way of checking off the service required for the unit when you bring it in for service. In this way, you can't forget to perform the correct service at that particular interval. There are many other PM checks that can and should be made. These are just a few key items of what a PM service interval should include. The benefits of keeping a good PM schedule, and sticking to it, are self-explanatory. Keep in mind that all PM schedules are provided to technicians by the equipment or engine manufacturer. It is not something that we need to

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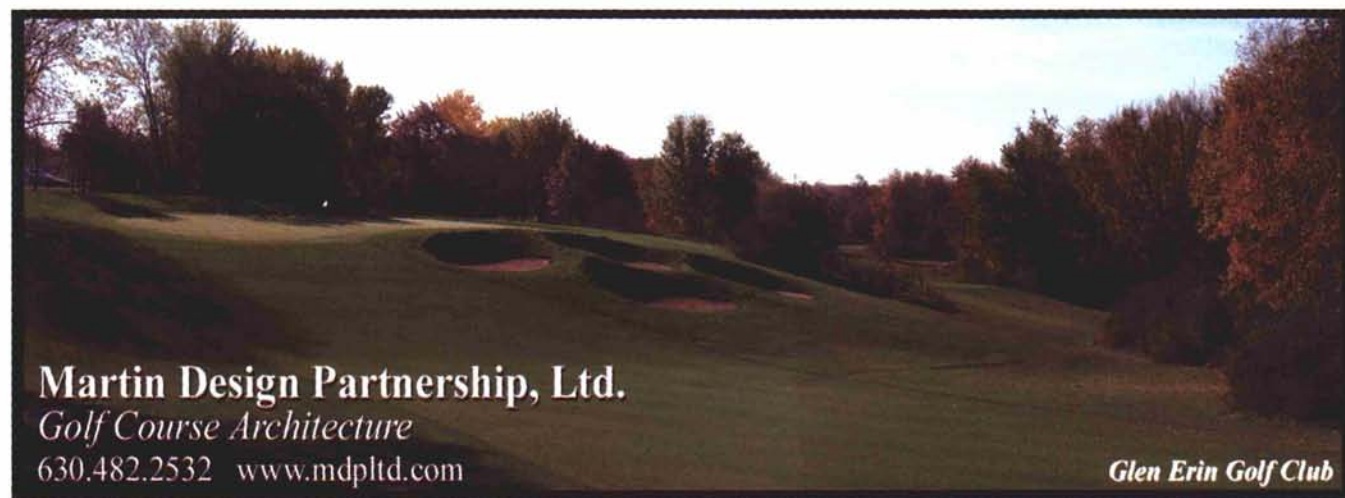
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invent; all we need to do with these schedules is follow them. PM schedules are not carved in stone and can be performed sooner or enhanced according to your conditions. When you enforce a good PM schedule, you are inspecting your equipment more frequently and catching failures before they occur. I am not saying that you will not have an occasional breakdown, just that you drastically reduce the chances. Personally, 95 percent of the equipment that rolls onto my lift is by my choice. That makes my job easier and less stressful. Keeping a preventive maintenance schedule at regular intervals requires work, determination, time, and consistency in order to reap its benefits. An important point is that you can order parts in advance before they fail, so the machine will not be out of service while waiting for parts. This also will allow you to make other arrangements if a part is not in stock or backordered.

Practicing good PM at regular intervals does not mean that you need to change fluids and filters again in the off-season, especially if the service interval is not due yet. Stick with the schedule and continue when the season starts again. I am sure most of you have a good schedule, but if you don't, try this out. You will be amazed how easy it is to maintain your equipment. An essential part of a great PM schedule is the cooperation of the superintendent in helping to coordinate mowing schedules so that the technician has adequate time to perform the scheduled maintenance. Well-trained operators who will inform the technician when and if a problem occurs are a big plus. Good communication between operators and technicians goes a long way. Well-maintained equipment will provide a better work environment in which technicians, superintendents and operators will benefit. It also will make the end product (the turf) look better and healthier, thus increasing the bottom line.



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