

Preventive Maintenance For Mowers & Other Equipment

by John N. MacLeod

The superintendent will rely heavily on a good mechanic to help implement a training and daily PM program. (3) The mechanic will not only thoroughly explain how each mower model or other machine works, but what signs of trouble to look for. This would entail teaching how to read and understand the hour meter, fuel gauge, water temperature gauge, oil pressure and alternator lights, as well as the overheat warning light for the engine. The employees should learn to watch for leaking oil or fuel, bent or worn parts, or black exhaust smoke. Any changes they can feel, such as slow engine response, excessive play in steering, or breaks that won't hold, or changes they can hear including rattles, squeaks, or knocks, should be immediately reported to the mechanic. (4) If properly taught how to use greens mowers and other equipment, employees can react quickly to problems that may develop during operation. Timely reaction can protect and prevent serious damage not only to the machine, but to the golf course as well. In addition to the above, a Pre Start Checklist is a great way for staff to help prevent breakdowns of equipment using daily inspection and routine PM. (5) A list is used to ensure PM exams are performed on mowers and other equipment. Pre Start Checklists would check things like oil levels, fuel level, tires, loose parts, hydraulic leaks, condition of belts, and for the mowers, inspection of the blades, bedknives, and signs of uneven wear. (6) The mechanic or superintendent should also inspect to see that mower reels are at proper cutting height and to schedule periodic grinding or lapping when needed. Bedknives should be set close enough to reels so that a strip or two of paper can be cleanly cut without metal to metal contact.

The backbone of any golf course is its mower units, since approximately 50% of the time spent is involved in the mowing of fairways, tees, greens, roughs, and other areas around the course. The loss of a mower, or any major piece of equipment, for that matter, can seriously affect the ability to keep the golf course properly maintained for play. As one superintendent put it, "Downtime will kill you, and make you look bad." So how do you make sure that your carefully planned golf course maintenance schedule is not undermined by breakdowns and equipment failure? The consensus is that the only way is to establish a good preventative maintenance program, "PM" for short.

Two factors are very important in implementing a successful preventive maintenance routine. The first, is a sound plan based on daily equipment inspections, especially for mowers, since they must be ready to run every day. The second, involves the careful keeping of records about each piece of equipment. (1) A good PM program will involve several elements, but the key element is training the staff. The superintendent must be sure that each employee is aware and understands that preventive maintenance is a major and important aspect of everyone's daily job objectives. (2) The staff must then be taught how to properly operate the equipment, especially the mowers. Communication is needed to insure that they understand how each and every piece of machinery works so that they are able to do a good job, and do it safely.



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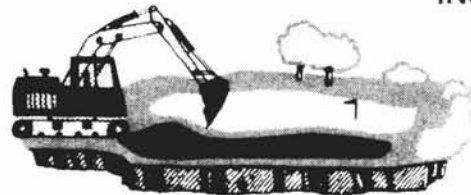
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(PM for Equipment continued)

The second factor in a successful PM program involves careful record keeping. Much of this administrative work and record keeping can be delegated to the mechanic or the superintendent may wish to do it himself. In any case, maintenance charts or cards should be filled out on each mower and major

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piece of equipment. (7,8) The cards may be kept using a system of monthly service checks or monitoring the number of hours a machine has been operated. The cards will indicate the most recent maintenance such as tune-ups or oil changes. They will show motor specifications, including type of spark plug and number, gap setting, and oil type to be used, or if a two cycle engine, the oil and gas mix ratio. They will include a good lubrication service program, both for transmission and engine oil. (9) The type and number of proper oil and fuel filters, air cleaner elements, will likewise be shown. A space should be provided for additional comments about special maintenance. Follow the manufacturers recommended maintenance and service schedule. In other words, go by the book, and make sure that the periodic schedule as outlined on that particular machine's maintenance card is religiously preformed. Keeping separate equipment folders of operator or owner manuals will help in this effort. The superintendent can also tell if repair costs have been above normal or within set limits by checking the maintenance cards. This will help in justifying the recommendation for replacement of the courses mowers and other equipment based on excessive costs that are backed up by good records. (10,11) To be successful, the PM program must be verified every day to ensure inspections are performed on all major equipment including the mower units. Daily inspections are very small investments in time when compared to the repayment, many times over, in lower operating costs and expenses. Finally, the records kept on golf course mowers and other equipment will prove useful in gathering budget information for next years maintenance and replacement costs. In the long run, PM, and good record keeping, in conjunction with proper training of staff, will result in significant savings in equipment, (longer life), downtime, (higher productivity), and economy (lower repair costs). (12)

To be successful, the PM program must be verified every day to ensure inspections are performed on all major equipment

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