

# Keep a watchful eye to extend equipment life



## A list of important things to know before finalizing a preventive maintenance program for your mowers, trimmers, blowers and edgers.

by Eli Luster

■ All of us face ever-rising standards and ever-lower budgets. Personnel and equipment are expected to do more than ever before. To help get the most out of your equipment, a preventive maintenance program can:

- 1) extend the life of your equipment;
- 2) provide you with written records;
- 3) provide maximum uptime; and
- 4) make your machines safer.

If you want to lower the total cost of doing business, you don't lower the equipment maintenance budget. It's been my experience that the condition of a shop is almost always reflected in the condition of the equipment and the condition of the turf.

Some of the new machines—like five-reel mowers—have close to 3,000 parts. One bolt can drop off and you're going to have downtime. And that's not the worst part. The worst part is when another machine comes along and the bolt goes

through a reel.

Excellence begins with your own attitudes: diligence, perseverance and attention to details. So the more effort you put into preventive maintenance, the greater the benefits.



**Eli Luster of John Deere doesn't advocate additives to motor oil.**

One of the first things to do is meet regularly with operators. Some of the best ideas for preventive maintenance come from your staff. You'll also get to know their concerns.

**The manual**—Keep equipment manuals handy; consult them regularly. They've

been researched, written by qualified writers, and approved by engineering staffs and technical editors. Usually they're illustrated by trained photographers or artists. Store them in a proper, easy-to-access location. Even experienced operators should review them. You can use them as a guide to develop your own preventive maintenance program.

**Fuel and its use**—The fuel system has to be clean and fresh, and you cannot tolerate moisture in it. Either use the largest underground storage tanks you can get by with, or build a roof over above-ground storage tanks. It's important that tanks be kept out of direct sunlight because heat and light are the two things that degrade fuel the quickest.

Two-cycle engines should have their own storage area. Write the mix right on the tank of each piece of equipment.

If you are using alcohol-based fuels (ethanol, ether, methanol), don't store them for more than 30 days. Methanol is highly corrosive: it'll melt plastic and eat rubber. To find out if you're using an alcohol-based fuel, see chart on page 18.

The new premium anti-pollution fuels are causing faster carbon build-up in cylinders, so you have to be especially watchful.

The best way to combat fuel problems is to use the fuels in a timely manner. Don't use fuel mixes left over from the previous summer or winter. Summer-blended fuels are less volatile in colder weather and give you carbon build-up on spark plugs. Conversely, you can get vapor lock with winter-blended fuels and a hotter running engine.

Your unused fuel? Don't dump it; call a waste management facility.

Diesel fuel supports the growth of bacteria and algae in warm, humid climates. If this happens, it has to be cleaned out of the entire fuel system. To help alleviate the problem:

- Keep storage tanks as full as possible.
- Use a bactericide or algicide as an

*continued on page 18*

#### TO TEST FOR AN ALCOHOL-BASED FUEL

1 - fill a container about 1/4 full with clean water;

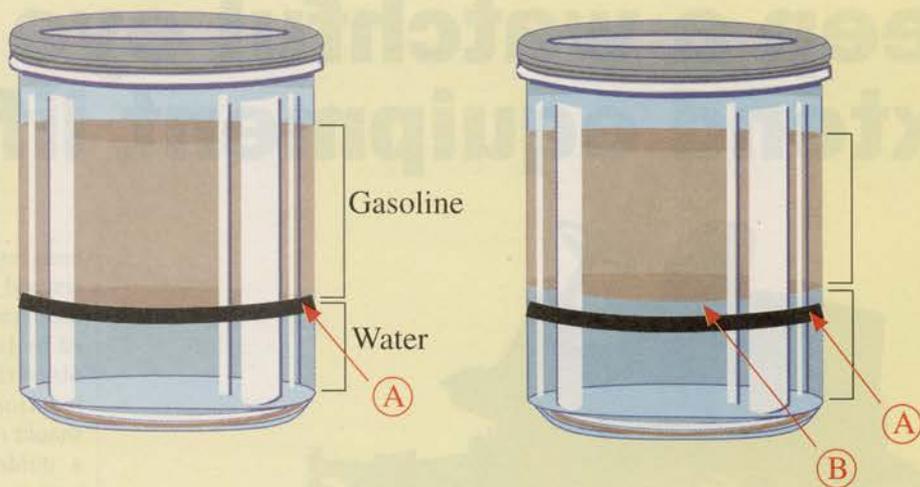
2 - fill container to 3/4 full with fuel;

3 - using a marker, mark line of fuel/water separation (A);

4 - cap and shake vigorously for 2 to 3 minutes;

5 - let settle 3 to 4 minutes.

If new line of separation (B) is higher than original line (A), the fuel IS alcohol-based.



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additive.

□ Change fuel filters at manufacturer's recommended intervals.

**Replacement parts**—"Will-fit" parts are different than original equipment manufacturer parts. You really have to be aware of the differences. Will-fit parts are usually required to have some military specifications, but original parts sometimes have things in them that aren't in

**Other key points**—Numerous other factors play key roles in how well your equipment functions on a day-to-day basis:

- Operators are your best service people because they know the machines. Train your operators to be alert to changes in the machine's performance. Look, feel and listen to the machine. Smell it, too.

- Equipment should be kept looking good. Keep it clean, and take care of paint nicks. It helps give you more trade-in value and forms a good operator's opinion of the equipment.

- Part of the reason we use anti-freeze is because of its corrosion inhibitors, especially in aluminum engines. So change it regularly because old antifreeze will still be cooling the engine but the anti-corrosive elements will be used up.

- The worst thing you can do for an air-cooled machine is to take the shrouding off. It must remain in place. In the spring, if you're having problems, you can

check behind the shrouding for mice nests.

- I don't advocate any additives to oil. Most oils today are far superior to what we were using a few years ago.

- Nothing will determine the quality of cut more than the cutting unit itself. People judge you by how your turf looks, and you can't cut grass with a blunt edge. Angles, reel speeds, and ground speeds have the potential to give you poor turf or shortened machine life. You should also clean the accumulated grass out of rotary decks.

- You have to have documentation. If you can go back and check how much the equipment is costing you to operate, you know whether it's time to trade it in. It can be as simple as a spiral-bound notebook.

- You almost need a checklist for end-of-day service. I suggest you blow-down the equipment with compressed air before you give it a liquid wash.

**Checking up**—Make these three checks regularly:

**CHECK UP**...Make sure the operators are performing regular maintenance. Have operators sign and date the checklist. Nobody can remember everything.

**CHECK BACK**...occasionally to make sure the pre-start checks are being done.

**CHECK WITH**...supervisors to make sure people are doing the checking.

Preventive maintenance is tough, but it's rewarding. You *can* save money—how much is up to you. Commitment means not what you are, but what you're willing to become.

—Eli Luster is field service coordinator for John Deere's Horicon (Wis.) Works. This article is an excerpt of a presentation he gave at the Sports Turf Managers Association's annual conference earlier this year.



**Angles, blade speeds and ground speeds have the potential to give you poor turf and shorten your machine's life, neither of which will help your bottom line.**

the military specs. Will-fit parts look the same and fit—but they give you totally different performance. If you're going to use well-fit parts, you're going to have to know the difference.