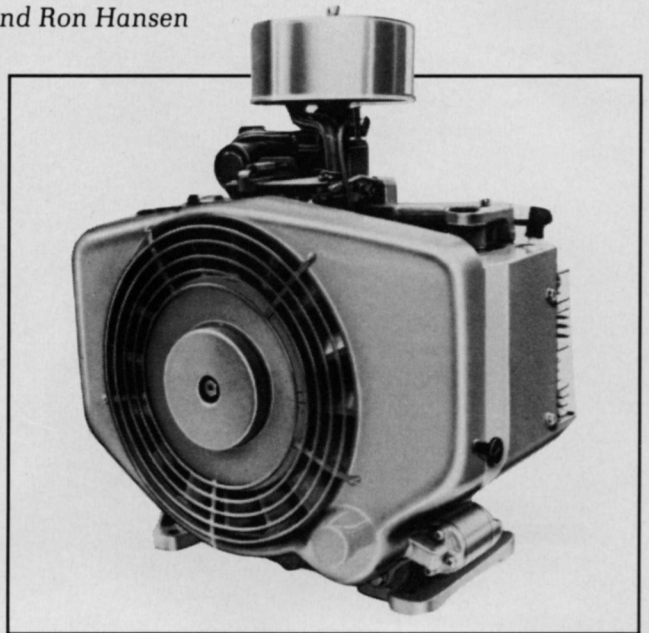
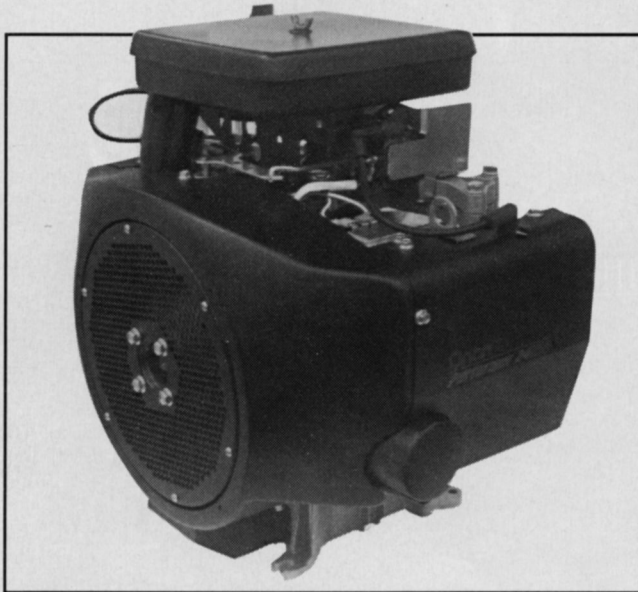


# FILLING THE ENGINE TRAINING GAP

The high-tech features of today's internal combustion engines require a new approach to training.

by Al Jacobsen and Ron Hansen



The improved technology of modern engines is evidenced by this new 24-hp engine (left), which is of comparable size to the older 13-hp model.

**R**evolutionary changes in automotive engine design have made the engines used on today's commercial turf equipment considerably better than those of just a few years ago.

Engines in the 10 to 25 hp range now boast many high-tech features, including fuel injection, electronic ignition, pressure lubrication and more. Today's engines also offer more horsepower in a smaller package. For example, today's typical 24-hp engine takes no more space than many engines in the 10-14 hp range of just 10 years ago.

While these improvements bring a host of benefits to users of commercial turf equipment, the advantages are not free. As engines have become more sophisticated, they've also gotten more complex.

Today's engines last longer, are more reliable, run quieter and use less fuel than ever before. But at the same

time, the increased level of technology, closer tolerances and the need to more carefully assure proper air flow and lubrication have all placed greater demands on service.

### More training needed

As engine maintenance gets more important and repairs more critical, many equipment owners and operators are finding they need added training support from engine manufacturers to get the most out of their lawn care equipment.

In typical turf equipment, the engine accounts for about one-third of the initial cost and at least half of the continuing maintenance cost. Equipment downtime often costs as much as \$100 per hour, not to mention the poor customer service that often follows.

Users at all levels are finding it pays to have an awareness and understanding of engine fundamentals. The need for more knowledge extends beyond service personnel. They need proper training to ensure maintenance and repairs are done in accordance with factory specifications. But

operating efficiency improves dramatically when people at all levels of the organization acquire better knowledge of the service function.

In some companies, everyone from service personnel to operators, first-level maintenance personnel, supervisors and, in some cases, administrative personnel attend factory-sponsored training sessions on engine maintenance. Reports from these attendees give convincing evidence that such company-wide training results in improved operating efficiency and reduced cost.

### Course depth increasing

Engine manufacturers have been quick to respond to the user's needs for more training by offering specialized courses and innovative teaching techniques. Onan Corporation, manufacturer of one- and two-cylinder gas engines, is a good example. The company offers specialized training on each product line. The standard engine training class lasts a full week and includes not only engine repair and maintenance, but ways to increase engine longevity,

Al Jacobsen and Ron Hansen work for Onan Corp. in Minneapolis, Minn. Jacobsen is manager of service training and Hansen is engine division merchandising manager.

economy and serviceability.

Other allied training available from manufacturers in a variety of forms includes customer relations, electrical and mechanical fundamentals, even telephone etiquette and more. For larger groups, companies offer on-site training in the field and tailored training to a particular company's needs.

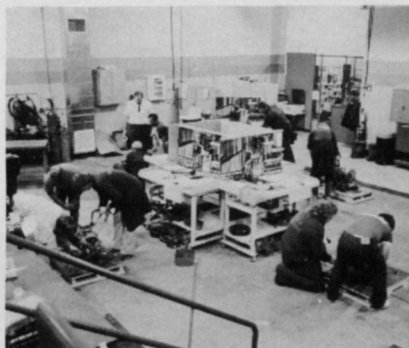
Some manufacturers' training facilities have fully equipped service shops and modern classrooms manned by a full-time staff. The classrooms today are vastly improved over training facilities of the past. In Onan's courses, for example, video monitors are used to zoom in on the most minute engine parts as the instructor explains to students the workings and adjustments of each engine component.

Company trainers stress hands-on training, including complete engine teardown, repair, rebuild and test. Most of this hands-on experience takes place in service training shops, where complete facilities are set up to simulate typical maintenance and repair operations.

Onan's facility has the tools and equipment to support training among



Equipment owners have found that it pays to get additional training



Modern training facilities at Onan feature a fully equipped service shop and staffed classroom.

other things, in valve grinding, cylinder resizing, bearing fitting, electrical test and engine evaluation. Continuing education and updates to existing classes on videotape are also offered. And for those really tough problems, there's an 800 hotline number for immediate help.

#### Training as an investment

Study after study has shown that investment in training pays off. And the payoff is not only monetary. Training also builds employee pride, teamwork and customer satisfaction.

Progressive companies view training as an investment in the future that is essential to compete in today's ever increasing-technical world.

Engines are too complex and turf equipment is too expensive to rely solely on a maintenance manual and standard tools for proper care. Turf equipment operators, service personnel and supervisors now need more extensive skills to adequately do their job. It takes a dedicated training staff with a properly equipped training facility to impart those skills.

Call your engine manufacturer for information on training best suited for your needs. **LM**

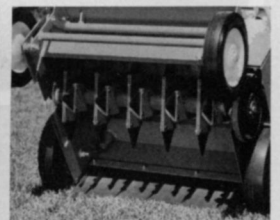
Before you fertilize . . .

# GET THE THATCH OUT!

According to turf experts, **excessive thatch** must be **removed** after a hard winter in order to have healthy turf in the spring. Thatch prevents **nutrients** from reaching down into the root structure. Result: the lawn cannot breathe and grow properly.



**BLUEBIRD INTERNATIONAL**®



knife reel



flail reel

BlueBird has the **most complete line** of power rakes in the industry, a rake for every lawn and purpose. Spacings for every application. Interchangeable flail reels and knife reels are available for vertical mowing, and together they answer **every need** of lawn service professionals in every part of the country. Call your distributor **today** for a BlueBird catalog. For the name of your distributor call the BlueBird Action Center. BlueBird International Inc., 2778 South Tejon, Englewood, Colorado 80110. Phone (303) 781-4458.

Circle No. 105 on Reader Inquiry Card