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In the last few years the turf industry has undergone many changes. Readily accepted practices of yesterday are, in some cases, antiquated by today's standards. We have seen new strains of grasses developed; new and different insecticides and fungicides; fertilizers with new analyses and last, but certainly not least, we have seen many changes in the equipment we use to maintain our professional turf. This is the area that I will spend some time on today.

As the trends and methods of growing formal turfgrasses change, it becomes necessary for the turf equipment manufacturers to constantly analyze the needs of the marketplace and update or design new products to meet these needs. This has certainly been a great challenge for us at Jacobsen.

With the increased research in the turf area recently, and with more superintendents working with experiments of their own, many new, creative methods of turfgrass maintenance have surfaced. Many of these new methods and techniques can be adapted and used by the vast majority of golf courses and country clubs, while other methods may be a little more restrictive. Types of grasses grown, natural soil conditions, the course lay-out and, of course, the budget monies available to you, can all play a very important role in determining the daily maintenance practices of your course.

Because there are many variables to consider, Jacobsen spends a considerable amount of time and effort in researching and developing products that will fit the needs of as many users as possible. This accounts for the fast product line that we offer. This year we are offering a total of five new products to the line. I would like to talk about two of these products today; the Trim King and the HF-5.

It has been proven that through the use of lighter weight equipment, we provide an improved growing environment for turf. We have less soil compaction, less tearing of the turf on turns, the units follow the contours much better, offering a more uniform quality of cut. Additionally, with light weight units we can cut in wetter conditions, provide greater traction with less tire tracking.

TRIM KING

The 70 inch all-hydraulic Trim King is designed for an exceptionally fine cut. With its maneuverability and versatility, the Trim King can provide a clean carpet finish to your turf. It provides variable hydraulic dual-rotation reels for mowing and back-lapping, hydraulic lift to the mowers, a manually operated positive traction feature, and a precision quality of cut. This compact, light-weight, 3-wheel design Trim King provides an excellent production machine.

Yes, the Trim King does look like the Greens King IV. There are many common interchangeable parts. However, the changes in the machine are sufficient to produce an excellent, all new, high production triplex. The

major changes were from a 14 H.P. to a 16 H.P. Kohler engine; from smooth tires to traction tires; certain hydraulic changes to complete the new design; and the development of new reel mowers for the various applications. The Trim King offers several standard features; an 8 gallon fuel tank, a maintenance-free battery, individual reel controls, and hydraulic backlapping. Additionally, it offers a light footprint of only 9 pounds per square inch on the turf.

We have designed a completely new reel for the Trim King. It is a 7 inch diameter, 5-blade reel. The three 26-inch reels are powered by direct drive dual rotation hydraulic torque motors. Total cutting width is 70 inches. Quick height adjuster rear rollers are standard equipment. Together with a micro-height adjuster, the Trim King offers an infinite height of cut between 3/8 inch and 2 inches. Variable clip frequency 0 to .6 gives the unit great flexibility for different types of grasses and conditions.

Grass catchers are also available as an option. They provide the professional touch for formal turf. Their capacity is seven bushels for all three. They are of a new design that go on quickly and come off quickly. Front rollers are available also as an option, and can be used either with or without the catchers. The Trim Kings 70 inch cut along with the 7 bushel catchers gives you the capacity to mow your par 3 fairways, along with collars and aprons. Striping and cross-mowing fairways or aprons is the trend today. Trim King will meet that challenge.

HF-5

A little over three years ago, Jacobsen realized that the trend for maneuverable, light weight fairway equipment was going to become a reality. We found that most of the superintendents that were following these practices were using triplex mowers. In discussing this matter with a number of superintendents, it became apparent that there was a need for a larger capacity unit than the triplex. At that time Jacobsen engineers went to the drawing boards and started initial design work on a brand new light weight 5-gang cutting unit. It was introduced to our distributors, and the field this past fall in the form of the HF-5.

The HF-5 is a compact, light weight, all hydraulic drive 5-gang mowing tractor. It is designed with "out front mowing", typical to most Jacobsen products. The unit can be operated as a 1, 3, 4, or 5-gang, and offers a cutting width up to 11 feet. The reels are powered by individual dual rotation hydraulic motors, giving a variable clip frequency and automatic backlapping as standard equipment. There are two reels available; the 6-blade reel, giving you a clip frequency of from 0 to 1.18 and the 10-blade reel, giving you a clip frequency of from 0 to .71. Height of cut on the HF-5 is variable from 3/8 inch to 3 inches. Skids, rear rollers, and front rollers are all available as options. A micro height adjuster is standard equipment when using rear rollers.

The HF-5 is powered by a 33 H.P. diesel engine. It features a Bosch fuel injection system, a full flow oil filter system, and pressurized gear pump oil lubrication. One of the best features of this Volkswagen diesel is its fuel economy. Tests on units in the field have shown an average of 9/10 gallon per hour over several thousand hours of operation. To protect the investment of your HF-5, Jacobsen has installed a horn which will sound if the engine oil pressure drops, or if the hydraulic oil overheats.

The traction control of the unit is done hydraulically. The variable foot control gives you a variable speed range, of about 0-7 mph in mow range and 0-10.5 in transport range. Dual traction wheels are standard equipment. Total weight of the unit is 2,475 pounds, which in the mowing mode, exerts a light foot print of only 8 p.s.i.

The cutting units are controlled from the operator's seat. Three levers to the left of the operator control the raising and lowering of the cutting units. A single lever controls the variable speed, forward and reverse of the reels. This is particularly useful for cross-cutting fairways, for backlapping, or adjusting the reel and bedknife. The center unit can be easily removed with one bolt. Tilt steering is standard equipment. Comfort and ease of operation were major considerations while designing the HF-5.

We have talked about a lot of features of our HF-5. It's light weight, it's maneuverable, it's easy to operate, and gives an excellent quality of cut. Now that we've discussed this, what else do we still need on this product to blend itself into today's modern mowing practices? What about catchers ? ? ? Two years ago, our advertising theme was "We hear you". And . . . we did hear you. We are happy to announce that the HF-5 will have catchers. Each catcher will hold about three bushels for a total capacity of about 15 bushels. The baskets are made from a sturdy polyethylene material. They can be removed easily for emptying. They are designed in such a fashion that they remain coupled to the tractor while transporting. They float evenly with each cutting unit over the terrain.

This makes the Jacobsen HF-5 one of the best innovations to hit the turf market in recent years. By combining the grass pick-up with the production of a light weight 5-gang configuration you now have a unit that will mow your fairways with minimum stress to the turf and pick up the clippings at the same time . . . and you can accomplish it in 1/2 to 2/3 the time that is required with a triplex.

The two products that we have just seen are only part of the Jacobsen family of reel mowers. We, at Jacobsen, feel that these two new products the Trim King and the HF-5, are two of the best new products to be introduced by any turf products company in years. We invite any comments or recommendations that you might have. Viewpoints and suggestions from our customers play an important role in the designing of our product line.