



A modern greens mower needs to match an excellent quality of cut with ease of operation. Although it is ride-on mowers that get the 'new' model attention, pedestrian machines have also developed, the latest designs having some interesting developments.

# THE DEVIL IS IN THE DETAIL

*By James de Havilland*

**It is often only when you get the chance to operate machines of different generations that some of the finer detail improvements on newer kit show up. Of course there are developments that have helped greens mowers become easier to set up and optimise for a really good finish, but when it comes to actually working the mower, it is the controls that are often the most overlooked advance.**

Ride-on greens mower evolution has, if you take a while to think about it, been pretty rapid. From the earliest machines that first started to find their way into the UK in the 1970s, they have changed a good deal. Think of the Toro Greensmaster III imported by Flymo in 1970, the Ransomes-Hahn Tournament Triplex of 1972 or even the model that started 'the modern' ride-on trend, the Jacobsen greens ride-on of 1968.

These early machines now seem pretty dated, but in terms of controls the models that followed them soon settled into a pattern that can see a 20 year old machine not feel as dated as many would think. But take a pedestrian model from even the 1950s and there are those who would perhaps suggest these machines are actually not that bad to operate. In fact, the lack of an OPC, operator presence control, is something many would like, even if the prospect of dripping petrol taps and oil leaks are something most would prefer to leave in the past.

The need for an OPC system has, of course, altered the control systems of the modern pedestrian greens mower. Some early OPC systems were, to put it politely, a bit awkward, with operators often working out a way in which to either tie up the control to prevent the engine stopping during

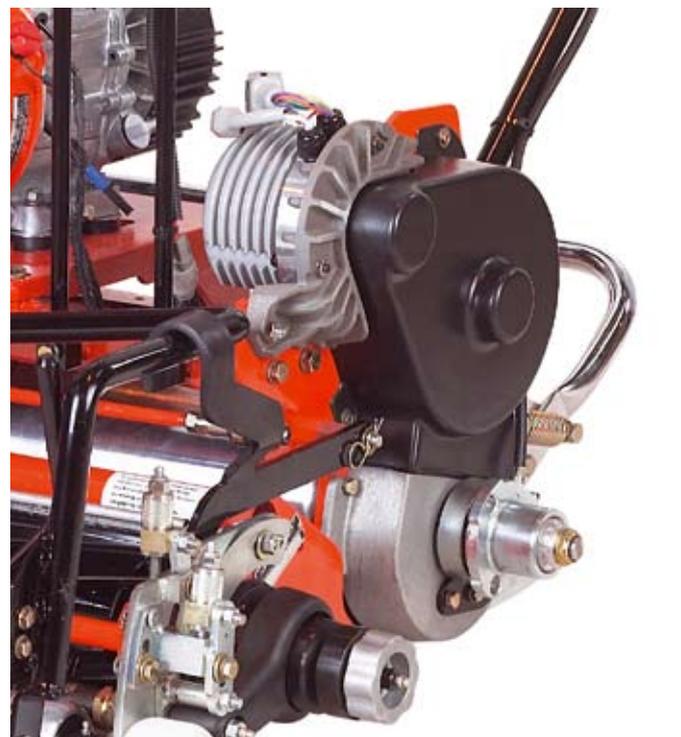
a tight manoeuvre or working out how to disable the system.

Fortunately, poor OPC design has largely been addressed on modern pedestrian mowers, but it is interesting to note that pedestrian controls continue to exercise the minds of mower designers. Take the latest Jacobsen Eclipse 122 'hybrid electric' greens mower as an example.

Fitted with InCommand, first seen on the 'conventional' Jacobsen PGM22 and Greens King 522/526 models, this control system is used in the same way as before but in this instance it operates the electric motors powering the Eclipse's roller and cylinder. The operator pushes the OPC control up to the mower handle to engage drive, with the InCommand 'T' bar enabling the mowing speed to be adjusted by simply tilting it (See photo caption). Where it all gets a bit more advanced on the Eclipse is with the extra degree of control afforded by using electric traction and cylinder drive motors. The speeds of both can be independently adjusted to allow the cuts per metre to be finely set to achieve the desired finish. The speeds selected for the roller and cylinder show up on an LCD screen on the control, enabling these to be re-set to suit a change in mowing to suit either difference greens or to allow mowing to be adjusted between everyday and tournament play.



The electric direct-drive cylinder motor on the Jacobsen Eclipse 122 offers wider setting flexibility than a mechanical driven system



A second electric motor on the Eclipse 122 drives the rear roller. Its speed can be easily varied



Jacobsen Eclipse 122 users will immediately notice the two electric motors, one for driving the cutting unit and the other for the rear roller. These are electronically operated by the InCommand system, and do away with mechanical control. Maintenance is virtually eliminated.

Both electric motors on the Eclipse are powered by a 48 volt generator. This is driven in one of two ways. Either via drop-in battery pack or as a petrol-electric 'hybrid', a 4.6hp Honda petrol engine delivering the power to drive the generator.

As there is no mechanically controlled drive 'clutch' on the Eclipse, Ransomes Jacobsen can safely claim the mower will have reduced maintenance needs. There are no cables to adjust and, because the clutches have been replaced with electric motors, clutch and cable wear and tear is eliminated. It is almost impossible for the operator to be 'ham fisted' when it comes to engaging drive too, a point that will also help the quality of work.



Familiar 'dead man' loop under D-handle has to be eased to the left and pulled up to engage the mower....

It may look familiar, but the latest C series greens mowers from John Deere benefit from some key changes over the existing B models. Note the clutter free control system

Toro and John Deere are also evolving their mowers. Take the recently introduced John Deere 180C, 220C and 260C models. These have been made lighter and are now claimed by the company to be among the lightest walk-behind greens mowers currently available. Why is this of relevance? After all, a relatively 'heavy' pedestrian machine has long been held to offer many advantages. The answer is more that these models will still be heavy enough to do their job, but be lighter to manoeuvre. Hand mowing a green can start to be pretty tiring is the mower used has to be manhandled to get it to turn as desired.

Powered by the latest 4hp Honda petrol engine, the new 'C' series Deere mowers are based upon the proven B and are designed to meet the latest emissions and environmental regulations. Featuring true cutting widths of 18, 22 and 26in (46, 56 and 66cm) respectively, the reduced weight C Series are claimed to allow the operator to more easily follow cut lines and overlap with more accuracy.

The OPC system features a quick release mechanism to disengage traction. Details like this will have a great influence upon the mower an operator would choose to do the job. Deere also suggests the new C series now offer lower noise and vibration levels, the loop-style handlebar offering a range of adjustments to suit the personal preferences of most operators.



... the thumb operate lateral control having '+' and '-' to the left and right to increase or decrease mowing speed.