The anatomy of...

A rotary mulch mower

Mulch mowing in the broader amenity and commercial sector tends to see a resurgence of interest when we enjoy a few dry summers in a row, the technique favours ‘little and often’ mowing and is well suited to helping to retain moisture in dry conditions. But does mulch mowing equipment now deserve wider use?

Anyone who has looked at the way rotary mowing has evolved over the past few years will be struck by the increased availability of what can broadly be termed a mulch mower.

On the pedestrian rotary front, the term should really be broadened to suggest more manufacturers are offering mowers that can mulch. Dedicated mulch mowers are out-sold by ‘3 in 1’ units that can readily switch between collection, cut and drop and mulch.

On ride-on equipment, it is increasingly likely that a modern rotary deck will be offered with a mulching kit. This can range from a simple outlet ‘bung’ that effectively seals the deck discharge through to a more comprehensive option that will see a different type of blade and modified baffles under the deck altering how clippings are handled. A ‘proper’ mulching deck is designed to do more than just contain clippings and chop them more finely. The aim is to chop and then ‘blow’ and evenly distribute the clippings back down into the sward to leave a clump free finish.

In other words is now established that some deck designs are better at producing a good mulch finish than others. Simply stopping clippings exiting a conventional ‘cut and drop’ deck does not turn it into a ‘proper’ mulching deck.

Another key issue is the wider adoption of rear discharge and single unit gang decks where the clippings that are left on the surface but well distributed to leave a really neat finish. Mulching decks are competing with ever improving ‘conventional’ rotary mowers in other words.

It of course follows that regular mowing of any description makes it easier to leave a decent finish. Fairway clippings are not routinely boxed off, the repeat slicing of clippings carried out by a sharp cylinder mower proving that a great finish can still be achieved without collection.

It is perhaps this point that is overlooked when looking at rotary mowers. How they are operated and the option of going for a deck that mulches as opposed to one that evenly distributes its clippings is not as broadly discussed as perhaps it could be. In certain circumstances, a good rear discharge deck will leave a finish that is pretty hard to tell from that left by a good mulch mower. Where a mulch deck can score, however, is in leaving a good finish on less regularly mown swards.

Understanding the basics of how a mulch mower operates can help explain why. The first point is that a mulch mower is not designed to cut grass down to the tight heights achievable with a cylinder mower or increasingly demanded of a rotary deck. The key to mulching is to leave a longer sward in which the ‘recycled’ clippings can be ‘hidden’.

In the British Isles there remains a desire to try and tame wider grassed areas to the point where many parks have a manicured ‘short lawn’ finish. And long may it continue. But try to expect a mulch mower to operate within this regime and it will typically lead to disappointment.

Where a mulch mower comes in is in the mowing of more general amenity grass. A good example is the turf around buildings that is not regularly walked over but that is valued for its overall appearance.
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How a mulching deck should work

A ‘proper’ rotary mulcher works by both re-chopping the grass to produce small clippings and then blow them back down and into the sward. The simple act of blocking the outlet of a ‘conventional’ rotary mower will not do this.

This is why ‘convertible’ deck mulch kits will typically incorporate some form of restriction around the blade or blades to restrict the flow of clippings. A kit may also include a change of blade type or even include ‘vamps’ against which ‘stalled’ clippings can be acted upon by the top of the blade.

Regardless of design, the aim is much the same – to leave the resultant finish as free of surface clippings as possible and to speed the decomposition of those clippings. A more aggressive mulching action helps decomposition, but good containment and the ability to force clippings back into the sward is also important.

Mowing technique will also play its part; the sward to clipping ratio has to be correct. The well-established rule is to cut a third of the sward length in any single pass. Try and mulch too much material into the blades. If the results remain poor, wait a day or two before attempting another single pass and the final aim is to be unnoticeable.

What about mulching leaves?

A dedicated mulching deck can be used to deal with autumn leaf fall. Getting the technique to work is not difficult, but a few basics points need to be followed to get the best results. The following tips relate to Toro Guardian Recycler decks, but the basics will apply to other designs.

Quick tips for a better leaf mulch

• The drier, the better. The mulch should be as dry as possible.
• Concentrate on mulching the leaves. Avoid trying to cut the lawn exactly the same time. This is of particular importance when working in damp conditions. Wet grass mixed with mulched leaves will be more likely to produce a ‘mat’ of material that will not be as readily broken down as the sward.
• When mulching a mat of wet leaves, it may be necessary to adjust the deck height and mowing speed to draw the material into the blades. If the results remain poor, wait until conditions improve.
• Keep the deck full. When mulching light patches of leaves, speed up to keep the deck working.
• Keep the deck underside clean and wash off at the end of each mowing session. If the deck starts to leave clumps, check it is clean.
• Try mowing in alternate directions. An initial pass with the deck at a higher setting, followed by a second at a lower setting in a different direction can be extremely effective in difficult conditions. NOTE: To get the best from all types of mulch mowing, it is recommended that repeat mowing patterns are avoided.

Setting up the deck for mulching

• Set the front of the deck lower than the rear; aim for a nose down ‘slope’ of around 6mm.
• Ensure air can pass under the front of the deck, particularly so when mulching deep piles of leaves.
• Set the deck height to mulch leaves, not to move.
• Make sure the blades are sharp and balanced.

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