

**Roland Taylor dispenses some excellent advice on tyres and tyre pressure which might just save you major problems for machinery and turf in the future**

# Inflated ideas?



Most of us spend a great deal of our waking hours floating around on cushions of air, hardly realising how dependent we have become on this aspect of transportation. Often the only time any thought is given to the humble tyre is when it is flat or needs replacing.

In modern turf management it plays an important role in the battle against compaction. Not so long ago the only tyres available for use on sports areas were designed to give as much traction as possible. As a result, when used on turf, they could do considerable damage especially when ground conditions were soft. The

need for a tyre with less ground pressure did not originate from the grass industry. It came from the forestry industry who were experiencing problems with the deep ruts formed in woodland areas where the ground conditions were soft, plus the high levels of punctures because of the rough terrain.

Owners of vineyards were also finding that the conventional form of tread and weight transference was damaging their vines' shallow root systems. Tyre manufacturers came up with a solution - a wide section tyre that distributed the weight of the machine over a greater area at a low

pressure. Research also revealed that by altering the tread pattern ample traction was achieved with the minimum damage to the surface.

There are now wide ranges of low ground pressure tyres on the market but it is important to get the right ones fitted for your specific requirements. This is determined by where the piece of equipment is going to be used and the types of operations it is expected to carry out. For example: In the case of a tractor you must take into account all the machinery it will be operating, the towing capacities and how much time is going to be spent travelling on hard surface. Once



the requirements have been formulated it is time to call in a tyre specialist. He can advise on the best type and tread pattern to give maximum performance and long life in specific applications. If you are thinking of replacing your existing tyres with a different low ground pressure type there are a number of factors that need to be addressed.

Will the machine's chassis accommodate the new ones, especially in the case where wheel arches or mudguards are fitted?

Is the height of cut going to be altered? (The mower might be higher off the ground).

If fitted with wider tyres will the machine still be able to go through gates or work in areas where access is limited?

The tyres on trailers and other ancillary machinery should be given as much attention as those fitted towing vehicles. It is only after the turf has been damaged that a problem with these shows up.

## What are the problems that can occur with tyres?

The correct inflation of a tyre is critical if it is to perform safely and correctly.

The most common problem is likely to be under-inflation.

\* This places more pressure on the side walls, which as a result can be seriously damaged.

\* The beading may come unseated so that air can escape, thus escalating the situation.

\* There will be increased wear, so the life of the tyre is reduced and in addition, the ride will be more uncomfortable.

Over inflation brings with it even more trouble.

\* Traction will be affected making the machine more difficult to control and increasing the likelihood of damaging the turf.

\* There is every possibility that increased compaction will occur because more of the machine weight is being transmitted onto the turf.

\* Fuel consumption will go up as the engine adjusts to meet the greater stresses being applied to all the components.

\* The performance of the unit will rapidly deteriorate as it struggles to maintain equilibrium.

\* Damage to turf escalates and there is increased tyre wear.

\* Similar to under inflation, the ride will not be very comfortable.







#### Tyre care

This is an aspect that is often overlooked. It should be part of the general maintenance programme, as tyres need to be thoroughly inspected at least once a fortnight.

1. From the above it is clear that the correct inflation pressure is the number one priority and this needs to be done on a regular basis. The recommended psi can be found in the machine's instruction manual. If this is not available contact either the supplier or a specialist tyre company. Use a gauge to check - guessing the pressure will not solve the problem.

2. Valve caps should always be fitted. Dust or dirt can find its way under the seating and cause a leakage.

3. Always be on the look out for signs of damage to the tread and side walls. A bulge indicates that things are not right. If a stone or other foreign body has lodged in the tread it needs removing. Any deep cuts will also require attention.

4. Where equipment is laid up for a longish period the tyres will have to be rested. The whole unit should be raised on jacks or blocks to take the load off the wheels.

5. Correct storage is important. The tyres (or wheels with them fitted) should be kept in a dark place, away from petrol, oil and other chemicals. Electric motors give off ozone, which over a period of time will break down the rubber content of a tyre, so they should be stored well away from these.

If a puncture does occur there are tyre sealants and plug kits now available to carry out an on site repair. Having a stock of these readily available will save a lot of time. Your local specialist will be able to give details on these products and advise which are the best.

If equipment is going to be used on the public highway the tyres and any repairs must conform to the regulations.

After the engine the tyres are some of the most important components if a piece of equipment is to work satisfactorily. In the event of a flat due to neglect, wear or a puncture the machine is inoperable. A lot of time can be wasted getting it repaired or obtaining a new one, so it makes sense to look after them correctly and thus reduce unnecessary hassle in 2001.

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