



ONE TRACTOR – TWO SETS OF WHEELS AND TYRES

By James de Havilland

Tractors come in such a huge variety of shapes and sizes these days it is easier than ever to buy a unit that is just right for a range of jobs. A concern, however, can be the tyres. Are the ones fitted as versatile as the tractor?

Not so long ago you had a limited choice of cleat agricultural, diamond pattern industrial or a block pattern turf tyre. Now tractor suppliers are offering an increasingly broad range of standard tyre, with factory fit options often including specialist turf designs. Sometimes, however, you may still want something else.

This need not be a problem. Tractor dealers can often work with you to come up with a new tyre package to suit a very specific need. But this can

also be the point where you start to compromise the tractor. Opt for nice fat flotation rubber, and the tractor will possibly be compromised when it comes to working on a hard surface. Fat tyres can also make it difficult to access some sites. And do you want to risk these tyres on jobs better suited to narrow, harder rubber?

There is an answer to saving costly flotation rubber, but it is an added expense; investing in two sets of wheels and tyres. This idea is hardly new, with numerous golf courses and contractors having become accustomed to swapping over tractor tyres as necessary. The trick is to make the job as straightforward as possible.

A decent trolley jack, level firm ground, axle stands and powerful air wrench can make a

wheel swap pretty simple. A torque wrench is also needed to ensure the wheel nuts are evenly tightened.

The snag can be when it comes to actually working with larger and heavier wheels. For one person, this can make wheel swapping a real chore.

The answer is a wheel changing unit. These slide under the raised wheel and then use an integral jack to raise a set of support rolls onto the wheel to allow its easy removal. The same unit can then be used to securely move the removed wheel to where it will be stored and then used to pick up the replacement.

When fitting the replacement wheel, the support rolls allow the wheel to be rotated so



Even the front tyres on a large tractor can be difficult to fit and remove. A wheel carrier, such as this unit from Sam Moreton & Sons (Farmers Tyre), makes the job not only easier but safer too.



Standard agricultural pattern tyres can quickly destroy turf, but this type of tyre is often the best choice for general purpose duties...



...turf tyres opening up another set of applications for the tractor. Two sets of wheels and tyres can make a great deal of sense.

it is correctly lined up with the hub. This can be a problem when 'manually' refitting a wheel, particularly if the swapped wheel is of a different diameter.

As an aside, wheel changing needs to be included as part of your standard risk assessment. Although it is common practice to leave a tractor supported only by a jack, axle stands or suitable blocks should also be used to ensure the tractor cannot fall should the jack be accidentally released.

It is also important to check the wheel nuts are correctly tightened and it is well worth re-checking these nuts after the tractor has been in use for a few hours. A torque wrench should always be used to tighten nuts evenly.

Where do you go for advice?

It is all too easy to assume that a tyre wholesale company or fitting outlet is also a tyre specialist. The reality is that it can take some shopping around to find someone who really understands your needs and can source the right tyres. When looking for alternative tyres, first determine what existing tyre and wheel rim are fitted. If these are not doing what is asked of them, identify what the problem is.

In most cases it will be that the tyres footprint and inflation pressures are incompatible with what you wish to achieve. At this stage, the solution will seem to be obvious. Fit as large a set of

tyres as possible onto the existing rims. As long as the diameter of the tyres matches those of the originals, the axle ratios on 4WD equipment should remain the same. The problem is that this is actually more difficult to achieve than may at first be appreciated. This can be due to low inflation pressures or the fact that some tyre diameters will vary according to how much air is in them.

Do not be afraid to mix and match different brands or patterns of tyre between axles. As long as the rolling diameters marry up on 4WD axles to prevent torque wind up, there will not be a problem. A specialist will be able to offer advice and come up with tyres to meet specific needs.



Trailed equipment, to include top dressers, are often offered with a choice of tyre size plus the option of two or four wheels across the rear of the unit. All this is wasted if the drawbar weight is transferred to the ground via skinny rear tractor tyres.



Taken at the Michelin test plant in France, this picture is often used to illustrate the difference a tyre can make to soil compaction. Although too extreme for turf, the key point is that a tyre with good flotation is less likely to compress the soil enough to stop air penetrating the root zone.



When looking to fit large flotation rubber to a tractor, seek advice. Fat tyres can foul mudguards and, if they have a different rolling diameter to standard, alter the tractor's gear ratios. Front and rear tyres need to be matched on 4WD models.



Tight budgets can make swapping to softer rubber difficult, but a tyre specialist may hold stocks of part worn tyres, sometimes fitted to a rim. A tyre that is past its best for on-highway use may well be fine if confined to turf or low speed work on hard surfaces.



Some older tyre types are often inflated to needlessly high pressures. Try letting out some air, but mark the tyre and rim to check for tyre creep and look for any excess bulging. If the tractor has to carry a heavy load you may need to up the inflation pressure.



When considering alternatives to standard tractor tyre offerings, remember a wheel rim can have its central 'dish' position varied to allow a wider tread to be fitted with no risk of fouling the tractor's bodywork.