

AGTYRE BULLETIN

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What do you know about tractor tyre pressures?
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Important facts about Agricultural Rims and Wheel Discs.



Tyre Torque



Tractor tyre fuel efficiency starts with the right tyre pressure



Selecting and fitting the right tyres for your tractor is vital to ensuring peak productivity and long-term durability of your equipment in the challenging conditions presented by Australian farming environments.

While often overlooked, however, it's the next step of managing and adjusting tyre pressures in accordance with differing loads, driving conditions and surfaces that can make a huge difference in the mileage of your tractor's tyres and their ability to generate optimal fuel efficiency.

In many cases tractors are expected to work hard both in the paddock and on the road, adapting with ease to whatever conditions arise. Even the toughest of equipment needs to have its tyre pressures diligently monitored and adjusted as

these conditions change, resulting in the best possible fuel efficiency and significant savings to your bottom line over time. According to a recent paper by **NSW Farmers***, fuel savings of as much as 15% can be made by correctly adjusting tyre pressures to match operating conditions.

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Tyre Torque



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The tips below may help to ensure your tyre pressure is what it should be and remind you what to look out for in any given condition or environment to maximise your fuel efficiency savings:

- ✓ Correct wheel and tyre configuration for your tractor and load is key - allowing you to use low tyre pressures in the paddock for the best traction while keeping soil compaction to a minimum. Make sure the pressure in your tyres is capable of carrying the load at the required speed. Check the tyre manufacturers specifications if you are in doubt.
- ✓ Ensure you are able to accurately measure and inflate your tyres using equipment that is suitable for your tractor, working conditions and operator. Avoid “setting and forgetting” tyre pressures. A commitment to adjusting them regularly can make significant differences to both their work output and fuel efficiencies. Under-inflating can be as problematic as setting the levels too high as this can cause your tyres to wear out prematurely and affect fuel efficiency.
- ✓ Tyre pressures can be measured in a number of ways either manually (taking care to use a gauge that is specially designed for agricultural and off-road tyre inflation) or remotely using wireless

tyre pressure monitors. CTI (central tyre inflation systems), is another efficient and easy option to monitor and change tyre pressures using an air-compressor located within your tractor’s cab. Measuring and adjusting inflation levels manually can be time-consuming and inconvenient, so one of the second two technologies above, while being more costly, may be worthwhile considering as more efficient and less labour intensive.

- ✓ Remember that tyre pressures are more accurately measured and inflated when the tyres are cold. When this cannot be avoided or inflation has to be done after the tyres have been working, the psi should be increased (check the manufacturer’s manual for your particular tractor for the advised increment).
- ✓ Work together with your operators to plan how often and when tyres should be inflated to run your tractors at the optimal operating levels and get the task at hand done efficiently. Make sure this plan is available and visible to everyone using the tractor.

*Farm Energy Innovation Program – Effective Farm Vehicles, Tyre Pressure and Fuel Efficiency NSW Farmers

Disclaimer: Information provided in this article is intended as a guide only, and we recommend you should consult with your local tyre dealer for accurate information specific to your situation.



Agricultural Outlook – what's in store for 2018?

Looking ahead to a new year and what's in store for the Agribusiness and farming community with the often unpredictable and very challenging extremes and variables of Australian weather, world economics and commodity prices – to name just a few – can be simultaneously daunting and exciting.

So what do things look like for the industry in 2018 and where are we heading?

Many experts seem to agree that the industry is performing relatively well despite the often difficult circumstances and this looks set to continue.

According to the latest commodities report by

the Australian Department of Agriculture and Water Resources (ABARES), there is a mixed forecast on the farming front with poor climate conditions in grain growing regions contributing to the gross value of farm production being forecast to reach \$59 billion in 2017-18 (down 7% from the previous year).

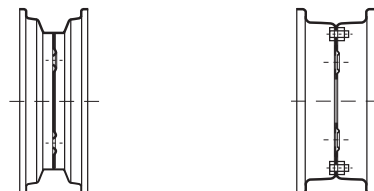
Canstar's industry outlook report for 2017-2018 covers each of the farming sectors analysing how they performed and what to expect for the next year and we'd like to share some pointers and excerpts from their report showing what they've discovered as a result of industry surveys conducted.

Visit our Vredestein blog at <https://vredesteintyres.com.au/category/news/> for more specific information about how the Agricultural industry is looking in 2018.



Rim & Wheels Discs - General Knowledge

A wheel is made up of both a rim and a wheel disc that are fixed to or detachable from each other and must exactly match. The rim size is of crucial importance to the tyre/rim combination.



Size designation of rims:

Two wheels are shown here with the associated meanings of the size indications.

Rim Choice

When using tubeless tyres, tubeless rims should also be used. A protective flap must always be used when combining inner tubes with multi-piece rims. This prevents damage to the inner tube.

Single rim	Multi-piece rim
4.00 E x 16	13 - 508
This means: 4.00 = rim width code (inches) E = rim flange height x = one piece rim 16 = rim diameter code (inches)	This means: 13 = rim width code (inches) - = multi-piece rim 508 = rim diameter code (mm)

The most important size indications of wheel discs are the following:

G = diameter of the central hole

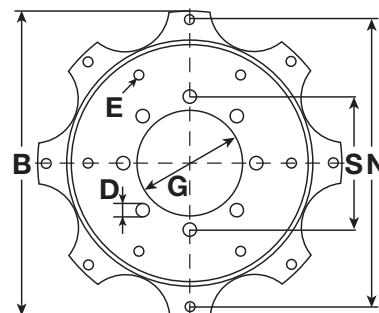
S = pitch circle of the stud holes and number of stud holes

N = diameter cleat circle and number of cleats

D = diameter stud hole and stud hole shape

E = extra stud holes in case of double fitting

B = outside diameter disc.



Warning:

The overall diameter can vary from one run to another for tyres that appear to be a similar size (see chart).

"Small" overall diameter		"Large" overall diameter	
Rim size code	Rim diameter D (mm)	Rim size code	Rim diameter D (mm)
430.9 mm	430.9	17	436.6
15	380.2	15.3	388.3
508 mm	508	20	512.8

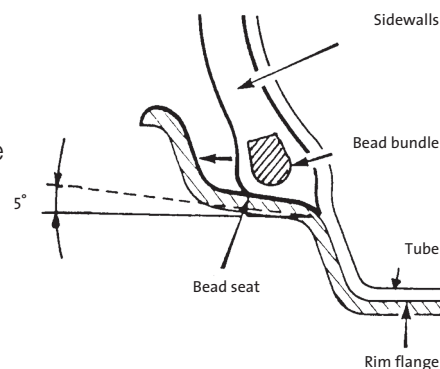
Always use the rim stipulated:

If you use a rim which is too narrow, the tread will be convex and, as is the case where tyre pressure is too high, there will be excessive wear of the centre of the tread.

The fitting of a tyre to the wrong rim can lead to highly dangerous consequences!

Fitting a "large" tyre (e.g. 10.0/75-15.3) on a smaller rim (i.e. rim size code 15) is dangerous. The tyre is loose-fitting and in extreme conditions can "blow-off" the ring. Rim-chafing can be the consequence.

Fitting a "smaller" tyre on a rim which is too large in overall diameter can also be dangerous! As the bead diameter of the tyre is smaller than the base rim-flange diameter, by inflating the tyre, the chances of the bead breaking and the tyre exploding are high.



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