

PROFI-LINE WHEELS - UNIQUE RIM PROFILE

The Profi-Line rim has been designed specifically for agricultural trailed and other load-bearing vehicles.

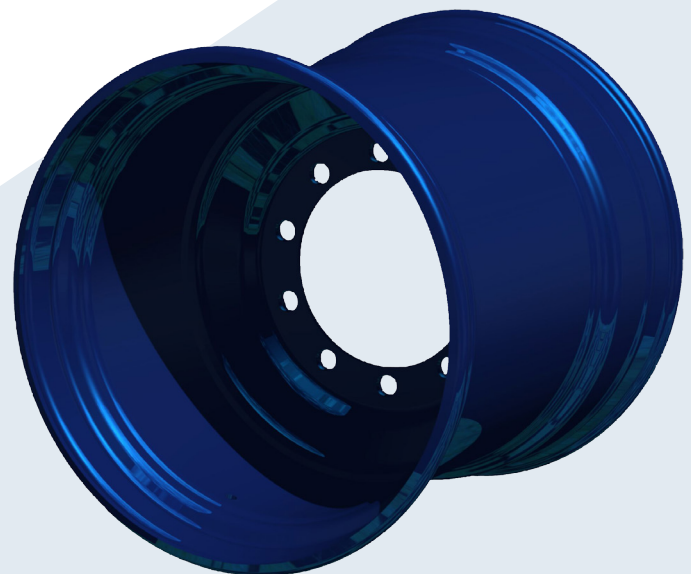
Implement or trailed agricultural equipment with wide tyres are continually exposed to high stresses, with one of the most stressed areas of the rim generally being the well radius. Trailed wheels must perform in arduous conditions whilst avoiding unnecessary weight and the associated impact on soil compaction. With the aim of continuous improvement, GKN Wheels has developed a new rim profile concept able to minimise stress in that radius.

To develop the more structurally efficient rim profile, detailed research using Finite Element Analysis (FEA) and acquisition of stress data by use of strained gauge wheels was carried out. This performance enhancement is based on two key changes to the rim design - a rolled over flange and a double well radius.

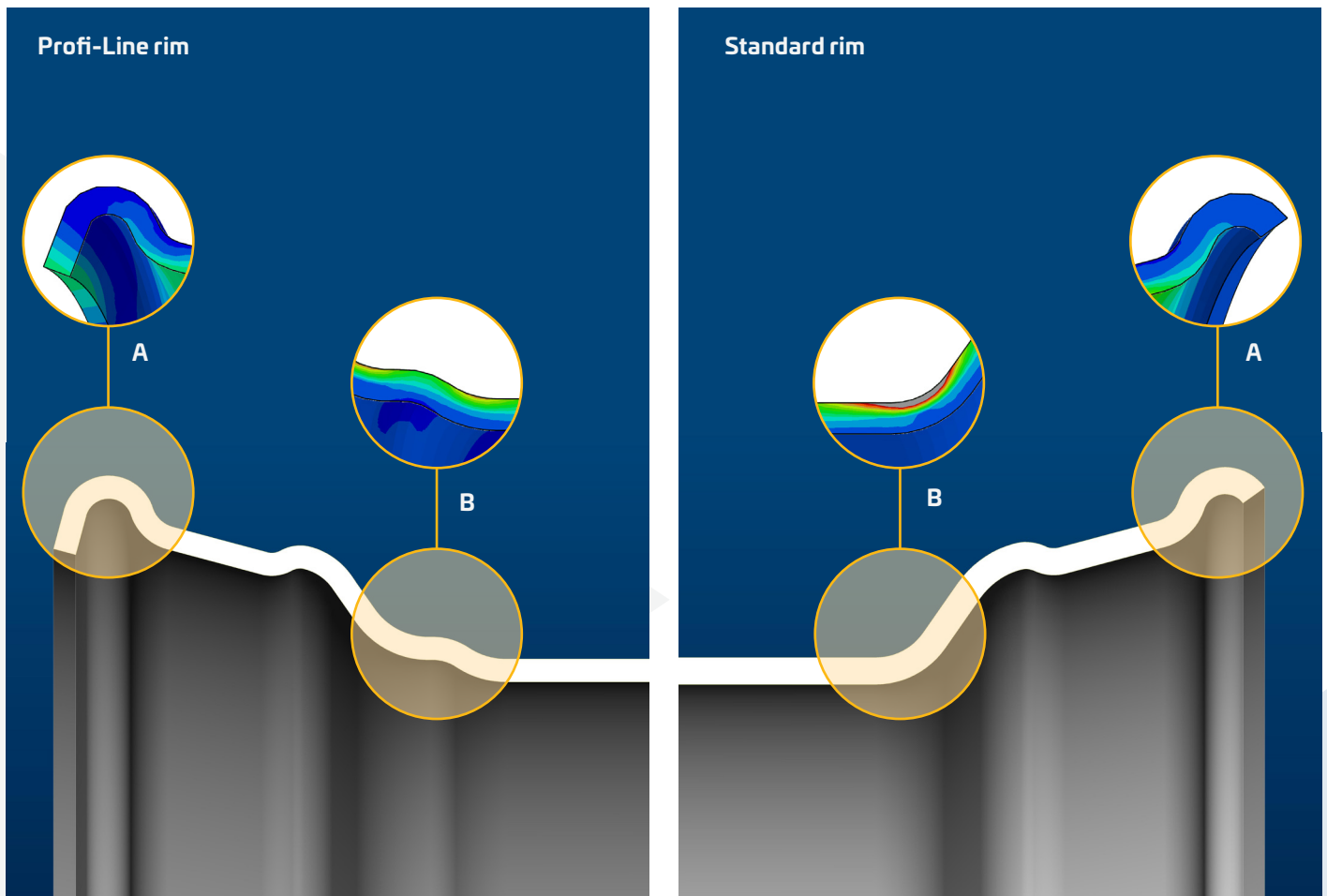
The new profile gives a stress reduction in the critical area around 40% compared with the traditional rim shape and as a result fatigue life is more than five times longer. These benefits are achieved whilst reducing rim gauge and weight without any loss of performance. The rim was developed to cope with the increased pressures of heavier loads and longer periods of use. This means more working hours for the wheel, particularly for heavy machines with intensive usage. The Profi-Line rim design is offered across the GKN range of flotation wheels and is available in sizes from 16.00 x 22.5" to 28.00 x 30.5".

Highlights >

- > Five-fold increase in fatigue life
- > 40% reduction of stress in key rim areas
- > Reduced weight with no loss of performance
- > Exhaustively tested in lab and field conditions
- > Developed to cope with heavier loads
- > Efficiency and performance benefits
- > Consistent and positive feedback from in field use



PROFI-LINE: PRODUCT FEATURES AND BENEFITS



GKN Wheels exclusive Profi-Line rim for flotation tyres incorporates two key changes:

- A.** Bent over double flange radius
- B.** Double well radius

As a result, and proven by extensive testing, fatigue life is over five times longer.

Quality is fundamental to GKN's product range across all sectors and product designs. All performance criteria comply with at least one of the following regional and international rim and tyre standards - TRA, ETRTO, JATMA and ISO.

For the customer, this translates into extended service life, reliable performance, safer operations and lower maintenance cost.

High Spot Marking >

When agricultural equipment is travelling at speeds of up to 50km/h, vibrations can occur in the wheel and tyre assembly which cause poor ride in the vehicle and poor handling. This is due to the wheel and tyre becoming 'out of balance'. This is overcome by a process known as High Spot Marking, which involves marking the high spot and the low spot on both the wheel and tyre and matching them up. GKN can now offer this process on Profi-Line wheels.

For further information please visit us at www.gknwheels.com or email us at marketing.wheels@gkn.com