

## Dual Wheel Assemblies



Dual wheel assemblies have three main functions:

1. To provide Extra Load capacity. As in a trucking & forklift application.
2. To provide Extra Traction. As in a rear tractor application.
3. To provide Stability. As in all applications.

As dual wheel assemblies are designed to work essentially as ONE wheel there are several factors service people must take into consideration when servicing them;

1. Tyres fitted to wheels must be of the same construction. i.e. Bias vs. Radial
2. Tyres must be of the same brand & type. i.e. Bridgestone VMT vs. Bridgestone VMT.
3. Tyre size must be the same.
4. Tyre pressures must be the same.
5. Tyres must be at the same rate of wear. We can allow a 15% difference in remaining tread depth.
6. Contact faces on the Knave plate and or wedges must be free of rust dirt or foreign objects.
7. Contact faces on the Hub must be free of rust dirt or foreign objects.
8. Wheel off sets must be within manufactures specification.
9. Hub centered and stud centered wheel rims should not be interchanged.
10. Re torque all wheel nuts of a Dual Wheel Assembly after a short run in period.

Should the above not be adhered to it may result in premature failure of the wheel assembly.

The golden rule for Dual Wheel Assemblies is. For the assembly to work as ONE wheel the tyres must be of the same diameter. Should this not be the case one or more of the following may result:

1. The larger tyre will carry more load and may result in premature failure due to heat build up and over loading.
2. The smaller tyre will wear at a rate faster than that of the larger tyre.
3. In severe cases of mis-matched diameters (see attached picture) failure of the Knave Plate may result due to increased load and stress placed on the wheel.
4. In severe cases, failure of the wheel ends and planetary sets may result due to improper load and stresses.

With regard to the wheel rims cleanliness is the key. Dirt, rust or foreign objects in and around the mounting faces of the Knave Plate and or wedges may result in a loose wheel.



This is considered to be a severe case of mis-matching. This type of practice is simply not acceptable.

