Irregular Wear In Dual Wheel Assemblies

Irregular Wear in Dual Wheel Assemblies is caused by two main problems;

1. Mis- matched tyres.
2. Mechanical failure. i.e Improper Wheel Alignment, worn or damaged Shock Absorbers, worn or damaged Suspension Bushes, etc.

The main reason for Irregular wear In Dual Wheel Assemblies is MIS-MATCHED TYRES.

Definition's of Mis-matched tyres being;

1. Tyres of different construction.
2. Tyres of different brand.
3. Tyres of different circumference.
4. Uneven tyre pressures across the dual pair.

Should any of the above be present in a Dual Wheel Assembly the result will be a difference in the circumference between the dual pair. As Dual Wheel Assemblies are designed to work as ONE wheel (i.e. both wheels fixed together), it is essential that both wheels have the same circumference.

In the event of a mis-matched dual pair, the smaller tyre will show Irregular Wear before the larger tyre. Thus the SMALLER tyre will wear out faster than the larger.

To explain this non logical situation, the distance traveled with one revolution is dictated by the circumference of the tyre, (Remember the dual assembly is working as ONE wheel therefore fixed together) therefore the distance traveled must be dictated by the LARGER wheel.

As it is physically impossible for the Smaller wheel to travel the same distance as the larger wheel by its circumference, and being fixed to the larger wheel, the smaller wheel is forced to catch up to the larger by way of scuffing along the road, therefore will show signs of irregular wear before the larger tyre.

Irregular wear of this nature normally shows as scalloping effect in the tread area of the tyre.

The larger tyre may also be affected by way of over loading in given situations.

In the case of severe mis-matched tyres the larger may in fact fail before the smaller tyre will show sign of irregular wear.

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