

# MD Alignment

Are Alignments on Trucks and Buses a GREEN procedure or a Money Drain (Part 21)

Tall Tire/Short Tire: Continued

If you consider each rib of a tire as separate individual tires, you can see that they need to have complimentary circumferences. That allows them to roll together and prevent irregular wear. If something causes one rib to change circumference, a tall tire/ short tire wear pattern starts on the shorter rib.

This condition can be caused by alignment, loose components or operational considerations.

For example, if the toe is wrong excessive wear will occur on one shoulder or the other and as this reduces the height of the outside rib on the tire the drag caused by the tall /short ribs takes over and causes the cupping to start. Once this has manifested itself visibly, the wear pattern cannot be corrected. On some of the newer Low Rolling Resistance Tires the lateral pressure on the tire can cause the foot print to buckle and produce center or second rib punch wear because when the buckled rib passes thru the foot print it becomes a tall/short rib pattern. On Low RR tires this can also be produced by under inflation.

By the same token loose components that fail to maintain the tire in a stable position can allow irregular patterns to develop on the shoulders or in the center ribs of the tire.

On widebased or super single tires speed can be a major issue. Above certain speeds, and this varies by width of tire and brand or model of tire, centrifugal forces on the tread of the tire will stretch the tire. This causes the center ribs to increase circumference compared to the outer ribs creating the tall/short pattern. Many tires display this pattern at speeds as low as 60 MH.



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A well know statement is that "once a pattern starts in a tire it will never stop."

Now you know why.