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# TyreTrends

Treading New Terrains

# SMART MOBILITY

WHEN FUTURE  
TRANSPORTATION  
RESPONDS TO ITS  
SURROUNDINGS AND  
ACTS RESPONSIBLY





## VIEW POINT

By Adam Gosling



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# FLEET TYRE MANAGEMENT

I've written about the critical importance of maintaining appropriate tyre pressures quite often and as critical as pressures are so many fleet managers seem to ignore the waste they are creating.

The irregular wear shown on the photo examples to the left are a result of poor pressure maintenance, matching and alignment. More of the same on the right. None of these tyres are actually worn out.

The wasted resources don't just stop with the cost of tyres.

Think of the

- increased fuel burn, increased engine wear as power units work harder
- increased bearing loads leading to reduced wheel end life
- suspension components being twisted as loads are not aligned with axle / chassis axis
- driver fatigue as the driver fights the vehicle to keep it straight down the road

and from a pavement manager's (Hello Governments!) perspective think about the side forces generated on the road surface. How does this affect the maintenance budgets of the road managers?

As an example of what I am saying go to the tyre bay now, grab an inflated truck tyre and roll it across the yard. Yes, it will roll easily as it is not constrained by a wheel end or other tyres attached to the same axle or for that matter vehicle.

Now drag the tyre at an angle (even just a degree or two) to the intended travel, yes by hand. How much more energy is required to drag the tyre to the same point in the yard? To you, the fleet manager, who is now exhausted, I ask directly, why do you expect your trucks and trailers be any different to your own experience?

Where does the energy required to abrade the tyres in the fashion demonstrated on the photos above come from? Only one place, the fuel tank of the vehicle.

So, when pressures are understood and brought under control the very next aspect to consider is the alignment of the tyres and wheel ends. As was experienced when dragging a single tyre across the yard the energy input is substantial affecting all the aforementioned cost centres on the fleet/vehicle.

In my previous article I discussed tyre tracking, how each tyre was tracked to determine the performance outcomes. With hard evidence in a

numerical format, educated decisions can be made about the performance of each tyre specification and how each vehicle determines the outcomes.

If one vehicle shows accelerated tyre wear is this the "fault" of the tyre or perhaps it is maybe that the vehicle has issues. So many people are very quick to blame the poor tyre, which is only doing what it is told to do. It has no say in how it performs; a tyre is totally at the mercy of the operator.

By understanding the performance decisions can be made on a sound economic basis rather than the wild guessimation that seems to be the manner in which many transport businesses conduct their tyre operations. With understanding comes positive economic benefits, enhanced safety and bottom-line profits which is after all the reason that we are in business is it not?

When considering alignment most issues for a multi combination (truck with trailer(s) usually reside with the trailers. People spend big time having the tractor axles aligned and then wonder why irregular tyre wear is still such an issue. The trailer actually pulls the tractor if it (the trailer) is not properly aligned. Consider the axles of the entire



*These tyres are not worn out, they have been thrown out.*

vehicle as a team. If they are not ALL going in the same direction, then how is the goal (i.e. profit) going to be achieved? Does a number of football players on the field together make a team? NO! Only when the individuals play as a team are the desired results gained. So why is it different for a multi axle vehicle?

Wheel alignment is an art, it takes a lot of experience to consider what information the tyres (and the driver) are providing. Making adjustments can sometimes be down to single

millimetres, yes it makes that much difference. Toe and castor settings, scrub and thrust angles all affect not only the tyres but also the wheel end life as well as the fuel burn rates. Often heard explanations are "that takes too much time or costs too much". Well, looking at the tyres in the photos above how much is being "sacrificed" in the name of economics? Sure, if it was "just" the tyres economic rationalisation could be sound but when fuel burn (consider ~2 – 6%), reduced wheel end life (actual can be 10 – 20%) are

added to the list do the economics still come to be the positive outcome thought to be so?

Then consider vehicle safety and driver safety as well as satisfaction. Driving a truck that requires constant adjustment to the steering to maintain the desired direction is profoundly tiring. The fact that a fatigued operator makes more errors of judgement is well accepted. So why are transport companies not striving to have their vehicles rolling down the highways and roads rather than being dragged? Remember dragging the tyre across the yard? Was that not quickly fatiguing?

The question remains why do so many people still ignore the waste generated from not utilising the second highest operating expense within a transport fleet, the humble tyre?

Are you so tired that tyres don't count? Why throw your profits away?

**• Adam Gosling and the team at TyreSafe Australia provide guidance and direction for all tyre users. Safety is paramount, so is efficiency and sustainability. Tyres are a globally universal product, the requirement for tyre safety is also a global standard. ■**

