

Almost every truck wastes tyres

I knew I had a problem. My F350 rear tyres were wearing out right down the middle of my expensive BFG 35 inch tyres. And I knew what the problem was – I was running too much tyre pressure most of the time. But I needed the high pressure to carry the small front end loader and tools I needed once a week. A chance conversation over a beer led me to develop Australia's own Central Tyre Inflation, AIR CTI, while learning so much more along the way. Tyre pressure is vital to safe economical transport, yet, almost everyone ignores this simple tool, wasting thousands and thousand of dollars annually. It's not rocket science and the information is available but no one discusses it. We blindly follow tradition which dates back 40 or more years, when our parents used 'cross ply' tyres. Radials are totally different. Check the tyre pressure charts below. Notice 20% overloaded wastes 37%, ie. one tyre in three is thrown away! Are you doing that?

TIRE	AXLE LOAD (lbs)	PRESS (psi)	LOADED SECTION WIDTH (mm)	FOOTPRINT LENGTH (mm)	FOOTPRINT WIDTH (mm)	TOTAL FOOTPRINT AREA (mm ²)	CONTACT SURFACE RATIO (x)	TOTAL CONTACT AREA (sq mm)
11R22.5 XDA-HT*	17,000	100	304	204	216	41,250	x	27,800
275/80R24.5 XDA-HT	17,000	100	298	206	215	40,750	x	27,300

The chart above is from the Michelin USA Tire Service Manual. Many say, "my tyre fitter looks after my tyres. He knows what he's doing." But who is the expert, the fitter or manufacturer? What pressure is correct? It depends on the tyre and the load it carries. The Michelin 2007 Truck and Bus Technical Data Book recommends these cold pressures for XZ and XD 11R 22.5 tyres:

- Standard Maximum Tandem axle load of 16.5 tonnes = 80 psi or 5.5 bar (2062kg per tyre).
- Standard Maximum Tri Axle load of 22.5 tonnes = 73 psi or 5 bar (1875kg per tyre).

Another example is an 11R22.5 XTE1 tyre on a dual fitment:

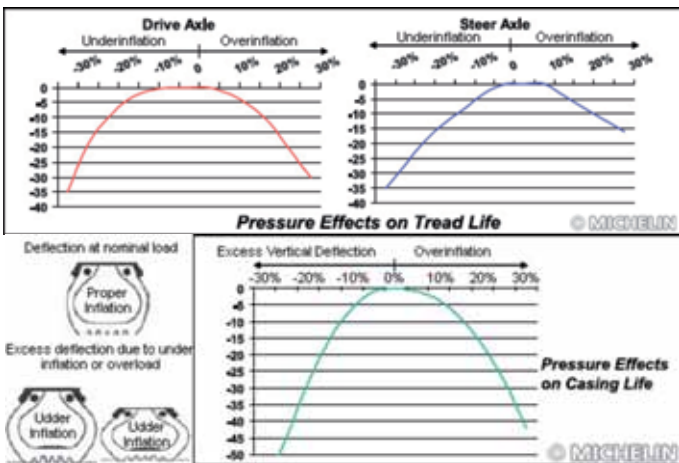
- The correct cold tyre pressure for a 2000kg load is 86 psi or 5.9 bar.
- The correct cold tyre pressure for a lighter 1250kg load is only 49 psi or 3.4 bar.

What does this mean in real terms? If you're running 110 psi in your tyres, they are 32% over inflated on the drive tyres, and 50% over inflated on your tri axle trailer. When the truck is empty, tyre waste is far worse.

Central Tyre Inflation (CTI) is the only practical method to optimize tyre life and service. Adjustable tyre pressure (CTI) can be driver controlled or tied to suspension air pressure. AIR CTI is the only Australian manufacturer and is the best investment you can make on your truck. For more information, see www.aircti.com, or call 03 5127 6128.

Consider the time wasted fixing tyres; getting new tyres fitted; fixing blow out damage; increased suspension, brake, and drive train maintenance; as well as the risk from poor braking. ABS, ELB and ESB are all great, but all of the stopping forces still go through the contact patch. What does an accident cost? What is your driver worth? AIR CTI will benefit every truck. If you're getting less than 100,000km on your drive tyres, have traction problems, or travel empty half the time, AIR CTI should be mandatory. It's the only way to optimise tyre costs, performance and safety, while minimising your impact on mother earth.

Chet Cline
AIR CTI Managing Director & ARTSA Executive Member



Your truck tyres will be over inflated and you will be wasting at least one tyre in three - but it gets worse. Over-pressure tyres get three times the punctures, stone bruises, cuts and uneven wear. They hammer your suspension, drive line, roads and trucks, thus increasing maintenance costs and break downs. They also don't grip as well, increasing braking distances; and they increase vibration levels, which damage drivers. The reason for this is simple. The amount of rubber that grips the road must be correct or it doesn't work as well. Tyre pressure needs to be adjusted to suit the load on the tyre; or tyre wear, traction and ride quality all suffer.