

## Tyre Pressure Build-up

As a pneumatic tyre rotates, the tyre pressure will increase, or build-up. This is quite normal.

There is a popular belief that tyres will burst if they build-up too much pressure. You need not concern yourself about passenger tyres bursting under these circumstances as the pressure at which the tyre will burst is probably 5 to 6 times the pressure at which it would normally operate – so don't worry.

However, what is important about pressure build-up is that it is controlled to no more than 20% of the cold starting pressure. In other words, if it started at 200kPa or 2.0 Bar, and the tyre builds-up to 240kPa, this would be quite acceptable. At this point the tyre would probably have a contained air temperature in the order of 70°C – which is well within acceptable limits.

The problems arise when the tyre pressure build-up is in excess of the 20% from the Cold starting pressure. As an example, should the tyre start at a cold pressure of 180kPa, or 1.8 Bar, and build-up to a hot operating pressure of 240kPa, this would in fact be a 33% pressure build-up. Under these circumstances, the tyre would be getting too hot, and the contained air temperature would now be in the order of 115°C. If the tyre gets too hot there is a danger and very good likelihood that the structure of the tyre will start to degenerate with the resultant tyre failure. This failure can either be in the form of a blow out or merely separation of the components – both of which can have disastrous effects on vehicle stability when it happens.

In order to prevent this happening, ensure that the tyre pressures are maintained at those recommended by the vehicle manufacturer. These are COLD tyre pressure recommendations, and should be checked every second week.

