

Inflating tyres with nitrogen (N2)

All series

Situation:

The question is regularly asked, whether inflating the tyres with nitrogen instead of air has any benefit with respect to a "gradual loss of tyre pressure". This process is also known as diffusion (diffusion is the movement of miniscule particles, especially atoms or molecules).

Statement

Some companies regard inflating the tyres with nitrogen as a way of selling the customer a feature that has no practical benefit whatsoever with respect to diffusion. As nitrogen has larger molecules, it would indeed be logical to argue in favour of inflating the tyres with nitrogen instead of with air. However, the improvement achieved is only marginal because air is anyway made up of about 78 % nitrogen.

Composition of air:

- 78 % nitrogen (N2)
- 21 % oxygen (O2)
- <1 % inert gases
- 0.03 % carbon dioxide (CO2)

The reduced rate in the drop in pressure inside the tyre is just a few hundredths of a bar over several months. Inflating the tyres with nitrogen does not relieve the driver from his duty (described in the Owner's Handbook) to check the tyre pressures regularly. Nitrogen is used in aviation and in motor racing because, in the event of an accident and the associated risk of fire, no additional oxygen should be fed from the tyres.

Affected vehicles:

All series

Procedure:Recommendation

BMW does not recommend inflating tyres with nitrogen. Should individual customers wish to have their tyre inflated with nitrogen, their wishes may be accommodated.