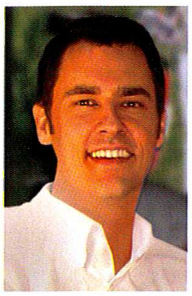

Brian Brasch

NITROGEN INFLATED TYRES

IT'S NOT JUST HOT AIR

Nitrogen inflation of tyres is still trapped in controversy despite evidence it reduces fuel use, cuts greenhouse gas emissions and results in better safety and ride qualities

Tyre Asia News Bureau

Tyres of Space Shuttle, race cars, commercial jetliners and fighter aircraft are inflated with nitrogen because of its unique qualities to sustain correct tyre pressure for a longer time, which is critical for safety and fuel efficiency.

However, proponents of nitrogen inflation of tyres for passenger cars and trucks say its wider use is yet to gain traction because it is caught in a chicken-egg situation. There is a vicious circle that is deflating widespread application of nitrogen filling despite proof that tyres using this last 30% longer and their fuel efficiency improves by 3.3%.

Nitrogen is a dry inert gas making up 78% of the air we breathe. Its molecular structure is larger than oxygen and it migrates through tyre membranes three to four times more slowly thereby resulting in maintenance of proper tyre pressure for a longer period of time.

Inflated safety : *Nitrogen filling improves safety and gives more mileage.*

If nitrogen is used in truck tyres that generally lasts 435,000 kms, they will get a further lease of life. It is claimed to gain an extended life of at least 544,000 kms thereby returning a saving of over US$ 120 per tyre. Some of the top tyremakers recommend its use with regular pressure checks. The reason for a lack of popularity of nitrogen filling is due to marketing bottlenecks.

"They say in marketing there are two strategies: Pull marketing, where the customer is the one driving the demand, and push marketing, where you push a new idea to the market," comments Brian Brasch, President of the Denver-based nonprofit organisation Get Nitrogen.

"This product needs both," he told ***Tyre Asia***. "For pull marketing, you first educate the customers with sites like www.getnitrogen.org and with pamphlets. Of course, the greatest traction comes from the "green" community that wants to help the environment," he said in an interview.

The second strategy is push marketing. "I've found the greatest success through distribution channels such as oil distributors that already have a relationship with the dealers such as car dealers and lube shops," Brasch points out.

"Sales people without this existing relationship have trouble selling a product that is not a necessity or essential tool as General Motors calls it.

It's also more than just the equipment, without training and dedicated sales staff led by a competent manager it's just another tool."

Proof in filling

He says critics have no proof and no test data to reject nitrogen's benefits. The average driver should save over 5% in fuel costs and extend tyre life by 31%.

One US national chain that installs it in all tyres figures their cost to inflate every tyre is US$ 0.07 which includes labour, filters, the machine depreciated over five years and additional air to power the generator. The increasing demand for nitrogen is due to its benefits of higher fuel efficiency, extended tyre life and increased safety.

"Nitrogen inflation is used where safety is of paramount importance and is compulsory in the airline industry. It is also a huge benefit in terms of performance, as demonstrated by Formula 1, and National Association for Stock Car Auto Racing (NASCAR). Their teams prefer nitrogen because tyre pressure fluctuations can be predicted more accurately," says Brasch.

Nitrogen can be used in any tyre, new or existing, but its widespread use will come only if there is enough pull marketing creating demand by educating the customer about its benefits in terms of savings and contribution to the environment

RESEARCH SHOWS BENEFITS

- A double-blind study showed saving of 416,395 litres of diesel with nitrogen tyre inflation
- Truck tyre filled with ordinary air is shown to lose approximately 1.4 to 1.7 psi every week whether it is parked on a trailer or running
- Another study shows nitrogen helps maintain tyre pressure and lessens rolling resistance contributing to fuel efficiency increase of up to 6.1%
- Various studies have shown that nitrogen increased tyre life by 40-50% (University of Bologna, Italy, 2000) and 51% (Clemson University, SC, 2007)
- Nitrogen filled tyre can maintain pressure 74% better per month at normal operating conditions
- Nitrogen inflated tyres produce about 70% less rolling resistance than air inflated tyres