



SUBJECT

Nitrogen Inflated Tires

MODEL

All

SITUATION

Many customers have inquired about the use of Nitrogen, instead of air, to inflate tires on their BMW vehicles. Please review the information below to help answer some of the customer's inquiries.

INFORMATION

- Nitrogen, an inert gas, is nothing more than dry air with the Oxygen removed. The majority of "air" already consists of Nitrogen (78% by volume). The other elements of air by volume are 21% Oxygen and 1% other gases.
- All BMW approved tires have been designed and tested to deliver their expected performance when inflated with "air" and the correct tire inflation pressure is maintained on a regular basis.
- The use of Nitrogen to inflate tires is not recommended for normal use of BMW vehicles; however, the use of Nitrogen is also not prohibited.
- There are certain applications where Nitrogen inflation is advisable, i.e. in abnormal environment where wheel and tire overheating may occur such as in aircrafts, space shuttles, military vehicles, off-road trucks, and race cars. In these applications, the non-flammable Nitrogen can reduce the risk of fire, because Nitrogen does not support combustion and does not add fuel to the fire.
- The physical properties of Nitrogen may reduce the inflation pressure loss only from the tire material natural permeability (diffusion through rubber). However, similar to air, Nitrogen can still escape from other sources of inflation pressure loss such as from wheel, wheel/tire interface, valve, and valve/wheel interface.
- The most important thing for the customers is to maintain the correct tire inflation pressure on a regular basis as recommended in the Owner's Manual. Under inflated tires can reduce road holding, increase hydroplaning risk, increase road hazards sensitivity, reduce tire life, increase fuel consumption, etc.
- If equipped on the vehicle, always reinitialize the Flat Tire Monitor (FTM) or reset the Tire Pressure Monitor (TPM) after the tire inflation pressure has been corrected.

[Copyright © 2006 BMW of North America, LLC]