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## Product Service Information Bulletin PSIB 07-01

### Using Nitrogen to Inflate Passenger and Light Truck Tires in Informal Service Applications

#### **Introduction & Purpose**

Nitrogen is being offered as an alternative to air for tire inflation. The purpose of this bulletin is to provide general information about inflating tires with nitrogen.\*

Tires are designed and built to provide many miles of excellent service but must be maintained properly. **The key element of proper tire maintenance is maintaining the recommended tire inflation pressure.** The proper tire inflation pressure is recommended by the vehicle manufacturer and can be found on the vehicle's tire placard or in the vehicle owner's manual. Continental Tire recommends that the consumer check his/her tire inflation pressure at regular intervals of at least once per month and before every long trip or twice per month depending on local regulations, customs, or conditions.

#### **Using Nitrogen in Tires**

Nitrogen is an inert (non-flammable) gas – basically, nothing more than dry air with oxygen removed. For example, ambient air contains about 78% nitrogen. Because of nitrogen's inert properties, it is often used in highly specialized tire service applications and/or demanding environments. These tire service applications usually include aircraft, mining, and commercial/heavy use. Also, nitrogen is used in professional motor racing involving extreme vehicle speeds. We understand that dry nitrogen is used in this regard to help reduce tire pressure variations where even small differences in pressure can affect vehicle handling at the extreme limits of performance.

For normal everyday consumer tire service applications, nitrogen tire inflation is not required. However, nitrogen tire inflation does not harm tires and may marginally contribute to reductions in tire inflation loss by permeation. Nevertheless, nitrogen will not prevent any tire inflation loss caused by punctures, tire/rim interface (bead) leaks, valve leaks, valve/rim interface leaks, wheel leaks, and other mechanical leaks. Again, the use of nitrogen alone does not substitute for the importance of regularly checking tire inflation pressure. If the tire inflation pressure is below the pressure specified on the vehicle placard, the tire must be re-inflated – whether with air or nitrogen – to the proper inflation pressure. Do not operate tires underinflated and/or overloaded (see "Warning").

**Whether inflated with air or nitrogen, regular tire inflation pressure maintenance remains critical and necessary. Use of nitrogen alone is not a replacement for regular tire inflation pressure maintenance.**

**WARNING [!]** Underinflation and/or overloading tires will create excessive stresses and heat build up that can lead to tire disablement, such as by a tread-belt separation and/or detachment, causing serious injury or death.