

## **Pump up the use of nitrogen to help deflate fleet expenses**

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Chris Miller

An Ohio jobber says he has found a viable way to cut costs in his delivery fleet by merely changing the air in his tires--a move that could serve as a model of success for other distributors and their fleet customers.

Matt Starke, who owns NAPA Auto Parts stores in Mentor and Wickliffe in Northeast Ohio, recently began using nitrogen to fill the tires of his fleet's vehicles. Starke predicts he and co-owner Jill Grinstead will eventually save about \$200 a month after all costs are factored, including fuel rebates. And that's just with a 10-vehicle fleet.

"It's a relatively new concept," says Starke. "Hopefully, my competitors won't do it."

Pure nitrogen increases tire life by 25 percent and, over the life of those tires, could save about \$100,000 for the bottom line in a 50-truck fleet, according to nitrogen machine manufacturer Parker Hannifin Corp.

Nitrogen remains in the wheel longer, results in better fuel efficiency and is less likely than compressed air to corrode rims and deteriorate tires, according to tire industry professionals.

Starke's fleet is one of a number of local businesses that have expressed an interest in filling tires with nitrogen, says D.D. Coley, president of Consumer Tire in Mentor, a NAPA Auto Care Center that purchased an extractor and generator for nitrogen fill-ups.

"We've filled 200 cars in the three and a half weeks we've had [the compressor]," says Coley. "A lot of people are coming in to have vehicles changed over."

Fleets and drivers of high-performance cars could perhaps benefit from using nitrogen because it does preserve wheel condition better than compressed air, but it's unlikely to catch on with the average tire buyer, predicts Kevin Rohlwing, senior vice president of education and technical services for the Tire Industry Association.

"It's a trend and I think it's growing," says Rohlwing. "Is it ever going to take over the industry? I think it's unlikely. The average tire buyer is not going to spend a dime more than they have to. When my family was in the [tire] business, my father would never pay for anything like that."

A number of nitrogen generator manufacturers have recently sprung up to supply the proper machinery to auto service centers, tire repair shops and other potential customers.

After reading about nitrogen in a tire trade magazine, Coley purchased a single machine called a nitrogen generator through a tire supply vendor that performs all of the shop's fill-ups.

Rohlwing advises service centers like Coley's to add the price of nitrogen inflation to recoup the cost of a generator.

"With a nitrogen inflation machine, you're all but guaranteeing that you're going to have dry air every time," he says. The moisture in compressed air--which is comprised of about 80 percent nitrogen and 20 percent oxygen, according to researchers--is said to corrode wheels and cause premature tire wear.

Because nitrogen molecules are heavier than compressed air, the air stays in the tire longer, leading to money saved in fuel costs, an allure that transcends multiple markets.

Coley says her husband claims to have gained about two miles per gallon since he started filling his tires with nitrogen.

Perhaps nitrogen customers are more mindful of proper tire pressure, suggests Rohlwing.

"Maintaining the inflation pressure prolongs the life of the tire, whether it's oxygen, nitrogen or whatever," he says, though he admits "nitrogen inflation is going to help the customer that does not regularly practice inflation pressure maintenance because [nitrogen] bleeds out slower."

Rohlwing says customers who drive high-performance vehicles and those who are service-oriented are likely candidates for using nitrogen.

For more practical reasons, the tire pressure of ultra low profile tires is more difficult to gauge, so nitrogen would benefit those vehicles. "When that tire is under-inflated, it's hard to tell," he says.

The fuel benefits and protection from excess tire wear were not the chief reasons Coley decided to offer nitrogen to customers. Nitrogen also protects air tools from the moisture otherwise found in compressed air.

"My hope was that we could run the whole shop on nitrogen for all the pneumatic tools," says Coley, who later realized all the tools could not run from the same source. She decided to purchase the extractor and compressor regardless, thinking it would be a smart move for her customers, especially those who prefer to maintain their custom wheels.

Little maintenance involved Nitrogen generators made by Branick, (a Fargo, N.D.-based firm from which Coley purchased her nitrogen equipment) separate pure nitrogen gas from air. The generators assume the role of nitrogen cylinders, which have been used by racing enthusiasts for years to fill tires and power pneumatic tools.

"Nitrogen generators work with membranes similar to the membranes they put in aircraft," says Gil Schoener, president of Branick.

The membrane acts as a "high-tech separator" by removing oxygen from the air. Little maintenance is required. A membrane in Branick's nitrogen generators has a life expectancy of about 10 years.

Do your research!

Those interested in purchasing a nitrogen generator should do some research. For example, one machine may cost \$10,000 with an additional \$1,000 every 10 years to replace the membrane. Another machine may cost only \$3,000, but the entire machine may need to be replaced every three years.

One roadblock to widespread usage of nitrogen is the admittedly significant overhead in the equipment cost. Coley says the extractor and compressor at her shop cost in the neighborhood of \$8,000, but she plans to recoup the equipment cost after about 780 fill-ups.

Though fleets may receive discounts, the consumer cost of filling tires with nitrogen typically runs between \$3 and \$5 per tire. Coley says her Mentor store will deflate and re-inflate tires with nitrogen and perform a tire rotation for \$10.

"When we install four tires, we install the nitrogen at no charge," she adds.

Along with cost, the most significant obstacle to nitrogen's widespread usage could merely be a lack of public awareness. Nitrogen also may face a misinformed public.

Coley has spoken with customers who think nitrogen is more flammable than compressed air, but the opposite is true. Nitrogen, in fact, prevents flammable gases from building up inside of the tire, a reason for its use on aircraft and racing cars. "Oxygen is flammable; nitrogen isn't," she says.

Though the benefits seemingly outweigh the costs, is nitrogen picking up enough steam to change the way tires are filled?

At press time, Branick's Schoener said his company was in the process of filling an order for 400 generators. In the 18 months Branick has produced nitrogen-based equipment, Schoener has seen a surge in business both domestically and internationally.

Some larger tire service chains contacted by Aftermarket Business have no immediate plans to implement nitrogen equipment, as many of them were still weighing the risks and benefits of the investment. TBC Corporation, which operates NTB, Tire Kingdom, Big O and other tire service locations, indicated it is examining the nitrogen market, but no decisions have been made regarding implementation.