

The formula for wholesaling industrial tires

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More than a passing fad

Tire dealers pump up bottom lines with nitrogen

By Mike Manges

Radio personalities Tom and Ray Magliozzi, a.k.a. "Click and Clack," didn't do nitrogen tire inflation any favors in their syndicated newspaper column earlier this year. After briefly discussing some of nitrogen's benefits, they concluded that "none of these advantages are important to the average driver. They just don't matter enough to ever think about. And they certainly don't matter enough to pay for."

"That's totally wrong," says Randy Clark, chairman of Cheektowaga, N.Y.-based Dunn Tire Corp., which offers nitrogen inflation at 26 outlets throughout New York and Pennsylvania. An increasing number of tire dealers are reporting that their customers accept nitrogen as a viable alternative to air and are gladly paying for the service.

Big investment

Dunn Tire began test marketing nitrogen inflation last September. In one market, the chain made it part of its out-the-door price. In the other markets it was sold as an add-on service. "We found if you have to sell it you have to do a good job of explaining it, which is fine if you have the time," says Clark.

Dunn Tire officials decided to build nitrogen inflation into the final sales tab. "Every tire that goes through Dunn gets filled with nitrogen."

Motorists who buy tires elsewhere can have them filled with nitrogen at a Dunn facility for \$5 a unit. Dunn Tire techs mark tires they have filled with nitrogen with a green washer that's placed under the valve stem.

"When customers come in, we hand them a brochure so they can sit in the waiting room and read all about it. Once you explain to customers what nitrogen inflation does for them, they get excited about it.

"We think nitrogen is a real benefit. The average person who doesn't maintain his air pressure — and that's the vast majority of people — will receive 3% to 5% better gas mileage." Clark and his employees experienced similar results when they put nitrogen in their own tires.

"If you maintain air pressure all the time, the benefits of nitrogen diminish. But the average customer doesn't do that. People don't maintain their vehicles the way they think they do."

Nitrogen-filled tires also run cooler, he says. In addition, nitrogen is dry, "so one of the things you avoid is the natural seepage of air" due to rust that forms around rim flanges.

The only drawback to nitrogen inflation is the start-up cost, according to Clark. "You really need to think about it and get the right equipment."

It cost Dunn Tire more than \$200,000 to install Ingersoll-Rand inflation equipment at its outlets while upgrading some generators that didn't have enough capacity.

"To make it economically viable, you need to be a high volume tire operation." Clark expects Dunn Tire to fill some 350,000 passenger and light truck tires with nitrogen by the end of the year.

"I think nitrogen is going to become pretty popular."

'Topping off' tires

Samaritan Tire Co. of Minnetonka, Minn., began offering nitrogen inflation several months ago. "I felt it would give us a competitive advantage because nobody offers the service in our market, with the exception of Costco (see sidebar on page 25)," says Samaritan Tire owner Chris Mortenson.

"When we first got it, my employees and I put nitrogen in our own vehicles' tires and monitored (its performance). It's done everything we expected."

Samaritan Tire charges \$5 to fill a tire with nitrogen. "It's a one-time charge. We don't charge anything for refills or for topping off tires."

Mortenson says 80% of his customers use nitrogen. "There's some degree of education that has to take place, explaining to them that their tires will run cooler and maintain pressure for a longer period of time."

Samaritan spent \$5,000 to buy an inflation unit from Ingersoll-Rand. The investment will have paid for itself by the end of this month. "We do a lot of tires. We're mounting 40 to 50 a day." Techs mounted up to 80 a day during peak season in June and July.

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Gary Klavinger, a service tech at JAM Tire Inc. in Northwood, Ohio, fills a customer's tire with nitrogen. JAM Tire is ahead of schedule in recovering its nitrogen inflation equipment investment.

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Filling a tire with nitrogen is no more difficult than filling a tire with air, according to Mortenson. "There are some things you have to do" to maintain the equipment, like draining its tank every night to remove any moisture that may have developed and replacing filters every six months to a year. "There are gauges that tell you when your filters need to be changed."

"We're happy with it. My only concern is that if our competitors offer nitrogen as a free service, we might have to go that route. But we could be the only ones around here doing it for a while."

'I'd do it again'

Ed Gindlesperger, owner of Gindy's Tire Warehouse in Erie, Pa., approached nitrogen inflation with some trepidation. He knew nitrogen had been successfully used in race and aircraft tires for years, but wasn't sure if the service would translate to passenger and light truck tire applications.

After much thought, Gindlesperger decided to give it a whirl and in-

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Craven Tire & Auto tech Jesus Toledo installs nitrogen at one of the dealership's shops. "We put nitrogen in everything now," says Craven Tire President Steve Craven. The company offers nitrogen at all of its stores.

Nitrogen tire inflation by the numbers

Addressing the myths and misconceptions

The air we breathe is made up of nitrogen (78%), oxygen (20%) and trace gasses like carbon dioxide, helium and argon (2%). So the compressed air used to fill tires already has a nitrogen gas base.

Nitrogen inflation equipment, which can cost anywhere from \$3,000 to \$14,000 depending on the size and use of the system, filters out non-nitrogen components. Without oxygen in the tire, there is less potential for moisture, which expands when it turns into a gas, then contracts when it turns back into a liquid. This can lead to pressure fluctuations, which is one reason why race tires and aircraft tires are commonly filled with nitrogen.

There is a lot of misinformation about nitrogen's use in passenger and light truck tires. Here we address them one by one.

1. Nitrogen has more mass than compressed air. False. It is true that nitrogen molecules diffuse through tire walls more slowly than air. However, this is because they are larger than oxygen molecules. "Pure nitrogen gas is lighter than air, although not by that much, since air is approximately 78% nitrogen anyway," says Dr. Ray Bergstra, sole proprietor and principle consultant at MTN Consulting Associates (his Ph.D. is in chemistry).

2. Nitrogen runs about 20% cooler than air. False. The temperature of nitrogen gas doesn't fluctuate; as a result of its use, however, the *tire* runs cooler. "The reason that tires filled with nitrogen stay cooler is because the nitrogen molecules move around faster than do oxygen molecules, and therefore pure nitrogen gas dissipates heat faster," says Bergstra. How much cooler is up to debate.

In addition, the tire doesn't deform as much because the tire pressure remains stable. "It helps maintain proper tire pressure longer," says Ryan Lang, market and solutions manager for Ingersoll-Rand.

3. Nitrogen inflation equipment produces 100% nitrogen. False. To get an efficient source of 100% nitrogen, filtration systems would have to be quite large, making them cost-prohibitive. In addition, the compressor needed to pull the nitrogen out of the air would have to run longer, lengthening the time it takes to provide the service.

The realistic industry target is anywhere from 95% to 98%, "depending on the purity level you want," says Lang. "It's a trade-off."

Nitrogen is an odorless, colorless gas. It is relatively non-combustible, non-flammable and non-corrosive, as opposed to oxygen, which in its natural form can be all three of the above.

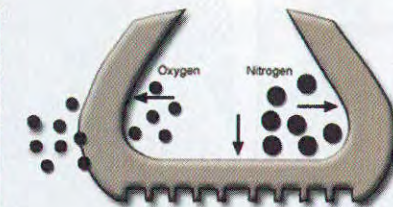
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stalled a Parker TireSaver machine.

"Feedback from my customers has been very positive," he says. "They tell me they're getting better gas mileage. Many have come back and asked me to inflate their other cars' tires with nitrogen."

Gindlesperger is so sold on the service that he even uses nitrogen in his 1934 Ford pickup's tires.

Northwood, Ohio-based JAM Tire Inc. began offering nitrogen late last year. "It was one of those things I knew nobody else in our area had,"

says JAM President Jim Jones. JAM uses Parker Hannifin equipment.

The single-location dealership charges \$3 per passenger and light truck tire. (It also fills medium truck tires with nitrogen at \$5 a pop — or \$10 a wheel with a new tire sale.) "We do a good job of promoting it. We had a banner made that is the first thing you see when you walk into our store." Jones also hung up a couple of Parker Hannifin posters and distributes informational brochures.

"My theory is that everyone will have this eventually. And they'll give it away. Our thought was, 'Why not offer

this while we can charge for it and people will pay for it?'"

Greg Shipley, vice president of operations for the company, says they've filled a lot of passenger tires with nitro-

Tiremakers chime in on nitrogen

Practice doesn't harm tires, they say

Goodyear Tire & Rubber Co. sent this bulletin about nitrogen inflation to its retailers last year:

"Nitrogen gas, as an inflation alternative to air, is becoming more prevalent in the marketplace and is being marketed as a benefit to the standard practice of using air to inflate tires. Goodyear supports the use of nitrogen as an inflation gas in all Goodyear, Kelly, Dunlop, associate and private brand products, based on the ability of a tire to retain pressure for a longer period of time.


"The use of nitrogen will not affect the tire warranty. Please be advised that even with the use of nitrogen as an inflation gas, regular inflation pressure checks are highly recommended.

"Please follow the manufacturer/supplier's safety guidelines for the storage and handling of nitrogen."

A May 2003 technical bulletin from Toyo Tire & Rubber Co. Ltd. also discussed nitrogen's advantages. However, it listed caveats like cost ("the cost effectiveness of nitrogen inflation will depend on the specific application") and the inability to go back to air ("adding even a small amount of compressed air to a tire inflated with nitrogen will negate the advantages of nitrogen inflation.")

"Nitrogen doesn't do any harm to a tire," says Bill Vandewater, consumer products manager for Bridgestone Firestone North American Tire LLC.


"Nitrogen is a maintenance aid in respect to tire pressure. A lot of claims that have to do with nitrogen have to do with tire pressure maintenance. If you're a person who carefully monitors air pressure, then the advantages of nitrogen are much fewer."



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gen, although the company's business ratio is currently 95% commercial, 5% retail.

"We tell people that the tire will run cooler and the tire pressure will stay up," says Shipley. "We tell them that with every one pound loss of air pressure, the tire's temperature increases by 10 degrees. So you can see, nitrogen helps preserve the casing."

No complaints

"The first time I saw nitrogen was four years ago (at a race track)," says Steve Craven, president of Craven Tire & Auto in Fairfax, Va. During a pit tour, he saw techs filling up tires "from a tank that said 'N2' on it. I asked, 'What's this?' and the tech said it was nitrogen" and then explained some of its benefits. "I said, 'You know, that would be a nice thing to have.'"

In June 2004, Craven finally installed a nitrogen inflation machine at one of his seven stores. "We tried to sell it as an add-on but weren't successful," he says. "When we started we didn't have any point-of-sale material and that hurt

Costco is pleased with nitrogen Pep Boys remains in testing stage

Costco Wholesale Corp. offers nitrogen inflation at more than 400 locations throughout the United States and Canada. "I'd been watching it in auto racing for a long time and asked our suppliers like Michelin and Bridgestone about it," says Robert Moyer, Costco's director of North American tire sales and service.

Costco began test-marketing nitrogen inflation two-and-a-half years ago. The service "was fully operational as of late August/early September 2004." Costco includes nitrogen in all tires it sells at no cost to its members.

"I can't say everyone has bought into it 100%. There have been a handful of customers who have told us they prefer regular air, but that number is so minute, we can't calculate it."

Pep Boys — Manny, Moe & Jack is test-marketing nitrogen inflation at 21 stores in the Atlanta, Ga., area. "It's new," says Bill Furtkevich, Pep Boys' senior director of marketing and advertising, "and the fact it adds value to the consumer's purchase makes sense (to offer the service)." However, he says it's too soon to tell if the service will be extended to other markets and stores. "We haven't had it in the marketplace long enough to comment one way or the other."

us. Our salespeople weren't sure about it. And the public didn't know anything about it.

"It was like selling snake oil. It was three times harder than selling a tire protection plan!"

Craven tried different prices — \$3,

\$4, \$5. Nothing worked. "People were suspicious of it."

He ultimately decided to include the service in the chain's tire balancing price, which seemed to soothe customers' concerns a bit. "We have a

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nice brochure now. We have more point-of-sale information. Our salespeople are more comfortable with it."

Craven Tire installed Nitronics inflation equipment at all of its outlets by October 2004. "We haven't had one complaint. And our sales volume has grown slightly (because of it)."

General consumer acceptance could be better, he admits. "I think it's going to take the American Automobile Association or the National Highway Traffic Safety Administration to say, 'This is a good thing....' But I don't see any downside to it. Even if it does half of what it's supposed to do, I think it's a benefit. I'd install (nitrogen equipment) again." ■



"You can't buy a tire from us without nitrogen in it," says Randy Clark, chairman of Dunn Tire Corp., which offers nitrogen inflation at 26 stores. Here, Dunn Tire tech Rob Green fills a tire with nitrogen.

Need nitrogen inflation equipment?

Here's where to look

The following companies manufacture and/or market nitrogen tire inflation equipment:

Branick Industries Inc.
Fargo, North Dakota
(800) 437-4394
www.branick.com

Golden Chest International Ltd.
Hong Kong
(852) 2851-9211
www.coseng.com.cn

Ingersoll-Rand
Annandale, N.J.
(800) 376-TOOL
www.irgaragesolutions.com

Manufacturers Distributors Inc.
Tampa, Fla.
(813) 241-4900
www.mfgdist.com

Mohawk Rubber Sales of N.E. Inc.
Hingham, Mass.
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Myers Tire Supply
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(800) 998-9897
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NitroTire Inc.
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Nitronics Systems Inc.
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(303) 604-1187
www.nitronics.com

Parker Hannifin Corp.
Haverhill, Mass.
(800) 343-4048
www.parkertiresaver.com

Pneumatech Inc.
Kenosha, Wis.
(888) 324-7728
www.NitroFillNow.com

Quincy Compressor
Quincy, Ill.
(217) 277-0343
www.quincycompressor.com

Tire Service Equipment
Manufacturing Co. Inc.
Phoenix, Ariz.
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Topping off your tires Nitrogen could replace air at service stations

Imagine pulling into a service station parking lot and topping off your tires with nitrogen instead of air. Sound far-fetched? It may be possible sooner than you think, according to Nick Verini, vice president of sales and marketing for Nitronics Systems Inc.

was a long-shot, says Joel Stevens, marketing specialist for Quincy Compressors. However, it will happen "once the foundation is set with tire dealerships and the infrastructure is there. But it will be the last phase. Service stations have less



capital to spend on special equipment (like nitrogen generators). But once one does it, they all will do it."

special equipment (like nitrogen generators). But once one does it, they all will do it."

"Filling with nitrogen at service stations would only occur after nitrogen becomes prominent in more tires," says Bob Daly, marketing and sales manager, industrial products, Parker Hannifin Corp.

Not enough people are riding on

Nitronics has a nitrogen machine "that we intend to put into service stations and convenience stores," he says. The Lafayette, Colo.-based nitrogen inflation system manufacturer is working on deals with a number of air machine distributors. ("Air machines are normally owned by distributors who share the profits with gas companies.")

Nitrogen inflation machines are more complex — and thus, more expensive — than air machines, which are basically air compressors, according to Verini.

However, he predicts drivers will be willing to pay more for nitrogen, which will make installation and maintenance costs more manageable. "The first thing people ask tire dealers when they put nitrogen in their tires is, 'Where do we get this on the road?'"

Other nitrogen inflation system manufacturers and marketers have mixed opinions about the proliferation of nitrogen inflation machines at service stations.

"I foresee there will be service stations offering nitrogen," says Gil Schoener, president of Branick Industries Inc. "The industry has been thinking more about nitrogen. It's a matter of sending the message out to the general public, especially the retail market."

Two years ago, the idea of nitrogen inflation systems at service stations

was a long-shot, says Joel Stevens, marketing specialist for Quincy Compressors. However, it will happen "once the foundation is set with tire dealerships and the infrastructure is there. But it will be the last phase. Service stations have less capital to spend on special equipment (like nitrogen generators). But once one does it, they all will do it."

Not enough people are riding on

nitrogen-filled tires to justify a machine on every corner, he explains. "A relatively small portion of the retail tire industry is offering nitrogen for new tires. And service stations are concerned with topping off rather than filling new tires."

Jim Hamrick, president of NitroTire Inc., believes nitrogen will be available at service stations. "Two factors will determine how soon. One, how quickly tire manufacturers come out with endorsements of nitrogen. Two, how soon OEMs start shipping cars from factories with nitrogen in their tires."

If they become commonplace, nitrogen machines most likely will be used by affluent drivers of high-end vehicles — not the average motorist, according to Wes Sprunk, president of Tire Service Equipment Manufacturing Co. Inc. "I don't see the guy who's running a five-year-old pickup truck doing it."

Sam Arledge, president, of Manufacturers Distributors Inc., gives the idea less of a chance. "You won't be (seeing) these at every Exxon or Citgo. If you're pulling up to put air in your tire, you'll pay 50 cents. You're not going to want to pay \$1.50 for nitrogen."

"Nitrogen is more expensive to produce than compressed air," says Joe Fresch, executive vice president of Pneumatech Inc. "But equipment is more compact, much smaller."

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