

Minimize Tire Wear

Why Nitrogen?

Nitrogen is a dry, inert gas used to inflate airplane tires, off-road truck tires, military vehicle tires, and race car tires for improved performance.

Oxygen in compressed air permeates through the wall of the tire reducing the tire's inflation pressure. During its journey through the tire wall, oxygen oxidizes the rubber compounds in the tire, causing under inflation and deteriorated rubber. Dry nitrogen will prevent auto-ignition, will not corrode rims, and helps the tire to run cooler.



Rubber Deterioration:

Oxygen permeates through the tire wall. As it permeates, the oxygen will react with the double bonds in the rubber causing them to break down over time. The oxidized rubber causes premature tire wear and in some cases, blowouts. Nitrogen is inert and does not react with the tire rubber.

Prevent Auto-Ignition:

When excessive heat is applied to the rim of a tire or the tire itself, a condition known as auto-ignition may occur. Hot, flammable gasses build up inside the tire and can explode. A mechanic using a torch to loosen a lug nut could be severely injured. The use of nitrogen minimizes this risk.



Rim Corrosion:

Moisture in compressed air accumulates inside the tire and causes rust and corrosion of internal surfaces of the rim. Rim corrosion leads to reduced rim life and increased costs. Since nitrogen is dry and inert, internal rusting and corrosion of the rim is eliminated.



Improve Safety Reduce Blowouts

Properly Inflated Tires:

To ensure that tires operate correctly and last throughout their intended life, they need to be inflated properly while in operation. Like a balloon inflated with air, tires inflated with air lose pressure, about 1.5 psi per month. This pressure loss is eliminated when tires are filled with nitrogen.



Maintain Proper Inflation:

Under inflated tires are caused by the permeation of air through the walls of the tire. Under inflation causes the following:

- The grip of the tire to the road is compromised.
- Optimum safety is not achieved.
- Tire life is limited.
- Fuel efficiency is decreased by up to 3.3%.
- Tires can fail prematurely.
- Heat builds up from tire flexing.

Overheated Tires:

Nitrogen filled tires run cooler. Under inflated tires flex causing heat build up. Heat build up is a leading cause of blowouts. A recent article from the Wall Street Journal states: "One thing government and tire industry officials agree on is the importance of keeping tires properly inflated. The risks of under inflation, which stresses tires by causing their sidewalls to flex more and the air temperature inside to rise, were highlighted during congressional hearings two years ago into the Firestone tire problems. Under inflation was identified as a factor in the failure of Firestone tires."

Wall Street Journal, September 25, 2002.

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Maximize Fuel Efficiency

Nitrogen Generated On-Site:

State of the art membrane technology used in the Advantage Nitrogen System is the preferred technology to deliver nitrogen for the trucking industry. The system has no moving parts, is very quiet, and requires simple annual maintenance. Installation is simple. The system can easily be connected to the existing compressed air supply and be ready to begin generating nitrogen in minutes.

Safe Delivery:

Nitrogen supply is often associated with hazardous, high pressure bottles or the delivery, storage and constant venting of liquid nitrogen. However, with the Advantage Nitrogen System, virtually all of these major concerns are eliminated. Customers are able to generate nitrogen on-site at the purity needed for tire inflation without the worry of any safety issues.

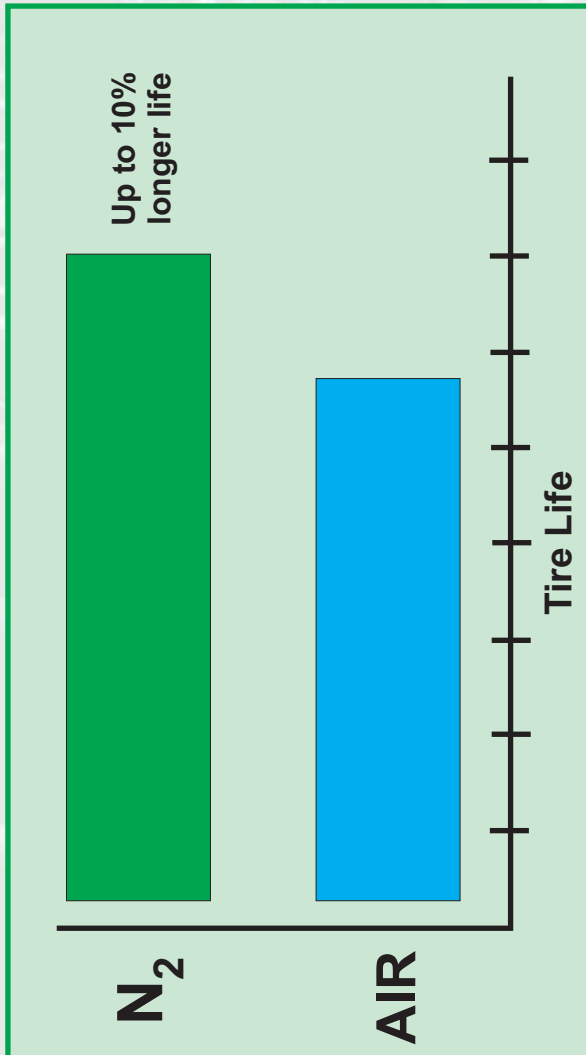
Product Features:

- The capacity to fill up to 30 tires per hour.
- No extra filling time when compared to compressed air inflation.
- Nitrogen generators can be directly connected to the existing compressed air lines.
- Delivers high quality nitrogen at the purity required for tire inflation.
- Compact design with small footprint.
- Minimum maintenance is required.
- Quiet operation.



ADVANTAGE™ NITROGEN SYSTEMS

Extend Tire Life Up To 25%



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Reduce Operation Costs

Reduce Fleet Tire Costs:

A typical truck tire with two retreads costs \$480.00 and will last approximately 270,000 miles. Increasing tire life by 10% improves the mileage to 297,000 miles and **saves an average of \$48.00 per tire**. A fleet with 50 trucks and 900 wheel positions **saves over \$40,000.00 in tire costs by simply inflating with nitrogen!**



Reduce Costly Blowouts:

A typical service call to repair a blowout can cost up to \$500.00 or more, especially when the hidden costs are considered. The effect of the blowout extends far beyond the cost of the repair. Consider the other costs of blowouts:

The Hidden Costs of Blowouts:

- Penalties for delayed product delivery.
- Spoilage of products.
- Driver idle time.
- Cost of lost production or lost revenue from having the truck out of service.
- Extra travel time for a mechanic.
- Extra repair time due to field conditions.
- Damage of associated parts.
- Refunds of shipping costs.
- Loss of goodwill.
- Overhead costs.

ADVANTAGE™
Nitrogen Systems

Keep Your Truck Fleet Rolling



*Extend tire life
Improve fuel efficiency
Reduce costly blowouts
Improve safety*

Fill Your Tires With Nitrogen


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NITROGEN INFLATION SYSTEMS