

# Nitrogen Tire Inflation Systems

aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



ENGINEERING **YOUR** SUCCESS



**Reduce Operating Costs**



**Eliminate TPMS Alarms**



**Extend Tire Life**

## Features and Benefits

- Produces high purity (95-98%) nitrogen from compressed air
- Most complete product line in the industry, offering tank mount units (stationary & portable), wall mount units, stand alone units for high capacity operation and mobile units for service trucks
- Most complete prefiltration package in the industry, offering maximum reliability and long operating life
- Autoinflator offered to purge & fill complete set of tires automatically
- Auto shutdown = less wear on your compressor, lower energy usage
- Broadest operating temperature range in the industry, from 33°F to 110°F
- Membrane is shipped fully aged, does not degrade over time, and provides consistent high performance throughout the life of the membrane
- No moving parts
- Easy installation. Pipe in compressed air, pipe out nitrogen
- Complete line of accessories available to help customize your nitrogen offering



## Why Use Nitrogen?

- **Maintain proper inflation pressure longer:**  
Tires inflated with compressed air lose 2 psi/month. It takes up to 6 months or more for the same loss with nitrogen
- **Improve fuel efficiency:**  
Properly inflated tires provide a 3.3% increase in miles/gallon
- **Eliminate chemical aging of the tire:**  
As oxygen permeates through the side wall, it degrades the rubber, causing the tire to deteriorate. Nitrogen is inert, and prolongs tire quality.
- **Longer tire life:**  
By maintaining proper inflation pressure and minimizing tire aging, tire life improves by up to 25%
- **Nitrogen is very dry (-50°F dewpoint):**  
Nitrogen eliminates condensation and rim corrosion, and will allow tires to run cooler and provide a safer ride.
- **Prevent autoignition of the tire:**  
Tires running cooler will minimize autoignition, providing a safer ride.
- **Increase retreadability:**  
As nitrogen minimizes the oxidation of the rubber, the tire retains its original quality longer, providing more retreads.
- **Nitrogen filled tires will last longer, provide increased safety, better fuel efficiency and reduced operating costs**

Model	N2 Flow @ 145 PSIG 68°F (SCFM)		N2 Flow @ 100 68°F (SCFM)
	95%	97%	95%
TS021	2.1	1.39	1.51
TS051	5.1	3.28	3.62
TS076	7.6	4.90	5.43
TS123	12.3	7.89	8.77
TS20F	19.9	12.74	14.13
TS34F	34	21.76	24.14
MTS06	6	3.84	NA
MTS12	12	7.68	NA







**Prevent Under Inflation**



**Improve Fuel Efficiency**



**Enhance Safety**

### What Industry Leaders Say:

Michelin supports the use of nitrogen based on its ability to better retain pressure over a period of time.

- **Michelin Technical Bulletin, November 2003**

Goodyear says 15% under-inflation = 8% less tread mileage and 2.5% decrease in fuel economy.

- **Goodyear Radial Truck Tire and Retread Service Manual, Pg. 40**

Pirelli says 20% under-inflation = 15% shorter tire life.

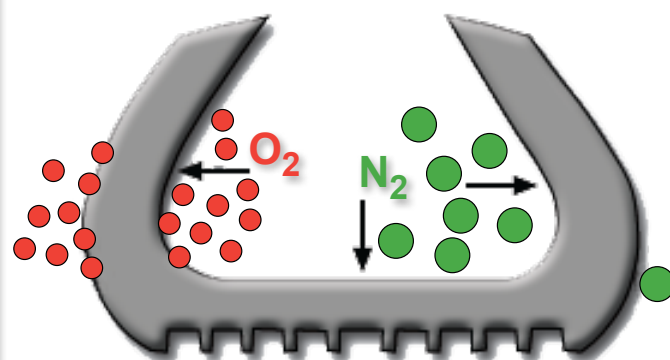
United States Department of Energy says the United States loses over 2 million gallons of fuel each day due to under-inflation.

TMC (Technology & Maintenance Council of the American Trucking Association) says that about 90% of tire failures causing tire road debris is caused by under-inflation.

- **TMC Tire Air Pressure Study, May 2002**

Bridgestone says air inflated tires lost an average of 2.7 psi per month and nitrogen inflated tires lost an average of 0.7 psi per month.

- **Guy Walenga, Clemson Tire Conference, March, 2004**



Cross section view of a tire

### System Specifications

1.5 PSIG,

97%	Max. Pressure (PSIG)	Inlet/Outlet (NPT)	Tank/Floor Mount Dimensions
98	145	1/2"	56"H x 26"W x 34"D
2.30	189	1/2"	56"H x 26"W x 34"D
3.43	189	1/2"	56"H x 26"W x 34"D
5.50	189	1/2"	56"H x 26"W x 34"D
8.79	189	3/4"-1/2"	69"H x 24"W x 20"D
15.01	189	3/4" 1/2"	69"H x 24"W x 20"D
NA	175	1/2"	42.5"H x 28.7"W x 11.5"D
NA	175	1/2"	42.5"H x 28.7"W x 11.5"D



### Return On Investment

#### Retail:

A typical passenger car will travel 15,000 miles/yr, cost \$100 to replace a tire, and get 20 mpg. This yields a fuel cost of \$2,250 annually. A 3.3% improvement will save \$75 annually.

Increasing tire life by 25% will save \$100 or \$25/year over the life of the tire. This yields a total savings of \$100 per year, or \$400 over the life of the tires.

This savings coupled with the fact that approximately 60 deaths/year and 10,000 accidents are attributed to underinflated tires, should make an easy sell.

#### Fleet Operations:

A typical truck tire with two retreads costs \$480 and lasts approximately 270,000 miles. Inflating tires with nitrogen has been shown to increase tire life up to 25%. Increasing tire life to 337,500 miles would save \$120/tire. A typical tractor trailer get 6 mpg, and over the 337,500 mile life of the tire, would use 56,250 gallons of fuel or \$168,750 (\$3/gal). A 3.3% improvement would save \$5,569 over the life of the tire. This yields a total savings of \$7,729 over the life of the tire. A fleet with 50 trucks and 900 wheel positions would save \$386,000 over the life of the tires.



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## Accessories

Part Number	Description
B04-0190	Green plastic valve caps (qty 2000)
TS-CHVC-B	TPMS compatible high grade chrome valve caps (qty 500)
TS-N2001C	Chrome cap 4-pack/sticker kit
TS-N2001G	Rubberized plastic green cap 4 pack/sticker kit
C02-2367	1/2" air separator
F602-12EJQ/M4	3/4" air separator
TS89XDB-G	High volume wall mount autoinflator, w/(4) inflation hoses and manifold
TS89TRL-4	High volume portable (trolley) autoinflator, w/(4) inflation hoses and manifold
B04-0400	12' rubber Parker hose w/chuck and coupler
B04-0401	24' rubber Parker hose w/chuck and coupler
B04-0407	35' rubber Parker hose w/chuck and coupler
B04-0357	Tire chucks (qty 4)
B04-0408	Dual foot chuck
B04-0409	Digital air pressure gauge
TS-02A	Digital nitrogen analyzer
B04-0410	Core removal tool
TS-30G	30 gallon storage tank
TS-60G	60 gallon storage tank
TS-120G	120 gallon storage tank
TS-240G	240 gallon storage tank

## Point of Purchase Materials

Part Number	Description
TS-Carlabel	Window decal (qty 250)
TS-UB8	Retail Tiresaver banner
Cpack-Tricar	Trifold brochures (qty 500)
TS-Displaycar	Counter trifold display
TS-Poster	Tiresaver poster (24 x 30)
TS-Buttoncar-25	Tiresaver button (qty 25)
TS-04-0073	Save fuel cards (qty 200) and holder
TS-81-0106	Save fuel cards refill pack (qty 1000)
TS-Tirecover	Tiresaver tirestack cover
TS-4001G	Standard hanging kit: includes plastic valve caps, informational booklet, stickers
TS-4001C	Premium hanging kit: includes chrome valve caps, informational booklet, stickers
TS-SRTD	Retail starter kit: includes (200) trifolds w/countertop display, (400) green plastic valve caps, retail banner, (250) window decals, (5) buttons, poster, (200) save fuel cards w/countertop display, TPMS compatible cap kit.

**For additional information on nitrogen tire inflation, go to:**  
**[www.getnitrogen.org](http://www.getnitrogen.org)**

# Parker TireSaver™ Nitrogen Tire Inflation Systems

## Commercial Truck and Fleet Models



Model TS34

### Generate Nitrogen On Demand

- Widest flow range available in marketplace to service even the largest commercial truck fleets.
- Heavy duty Parker Hannifin (4) stage filtration provides contaminant-free compressed air. Includes carbon adsorption filter, a must have in any generator installation
- Includes nitrogen membrane produced by Cleveland, OH based Parker Hannifin, with expertise from over 20,000 nitrogen generator installations worldwide
- Includes 60 gallon nitrogen storage tank
- Mobile units available for service truck installations. The Parker Mobile unit is the only unit that can operate in extreme environments without a membrane heater
- Wide variety of options available including auto inflators, valve caps and sleeves, separators, etc.
- Easy installation. Simply pipe in compressed air and pipe out nitrogen

### Reaction from the Commercial Truck and Tire Market

#### ***"Tires last at least 30% longer"***

- Maurice Sanchez  
Brothers Auto Transport  
Fort Lauderdale, FL

#### ***"Every blowout costs \$500.00. Eight months in have not had a nitrogen tire failure"***

- Paul Mincy  
Adams Motor Express  
Carnsville, GA

#### ***"1/10th mile per gallon improvements over air...retreadability increased dramatically" (approximately a 2% improvement)***

- Jim Keiser  
Wood County Bandag  
Bowling Green, OH

#### ***"120,000 miles...loss of 2/32 of treadwear depth."***

- Paul Hamm  
Winnipeg Motor Express  
Winnipeg, Manitoba



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# Parker TireSaver™

## Nitrogen Tire Inflation Systems

Principal Specifications				
Model	TS20F	TS34F	MTS06	MTS12
N2 Flow @ 97% purity, 145 psig, scfm	12.5	21.4	3.8	7.6
N2 Flow @ 95% purity, 145 psig, scfm	19.9	34	6	12
Maximum air requirement, scfm	46	88	16	32
Compressed air pressure requirement, psig	145 - 189	145 - 189	145 - 175	145 - 175
Maximum compressed air pressure, psig	189	189	175	175
Compressed air temperature range	50°F - 104°F	50°F - 104°F	40°F - 250°F	40°F - 250°F
Ambient temperature	68°F	68°F	68°F	68°F
Nitrogen dew point	-50°F	-50°F	< 40°F pressure dew point	< 40°F pressure dew point
Ambient operating temperature	33°F - 110°F	33°F - 110°F	-30°F - 120°F*	-30°F - 120°F*
Compressed air prefiltration	4 stage including carbon adsorption	4 stage including carbon adsorption	4 stage including carbon adsorption	4 stage including carbon adsorption
Floor mount dimensions	69"H x 24"W x 20"D, 400 lbs.	69"H x 24"W x 20"D, 422 lbs.	42.5"H x 28.7"W x 11.5"D, 200 lbs.	42.5"H x 28.7"W x 11.5"D, 300 lbs.
Inlet/Outlet connection	3/4" NPT / 1/2" NPT	3/4" NPT / 1/2" NPT	1/2" NPT / 1/2" NPT	1/2" NPT / 1/2" NPT
Noise level	<45 dba	<45 dba	<45 dba	<45 dba
Required annual maintenance	Filters and Carbon	Filters and Carbon	Filters and Carbon	Filters and Carbon
Application	Truck Tires	Truck Tires	Truck Tires	Truck Tires
Annual maintenance kit	MK-TS20F	MK-TS24F	MK-MTS	MK-MTS

\* 120°F maximum temperature for intermittent use only. 110°F maximum temperature for continuous use.



TS20/TS34F



MTS06/MTS12



MTS06 Installed on a Service Truck

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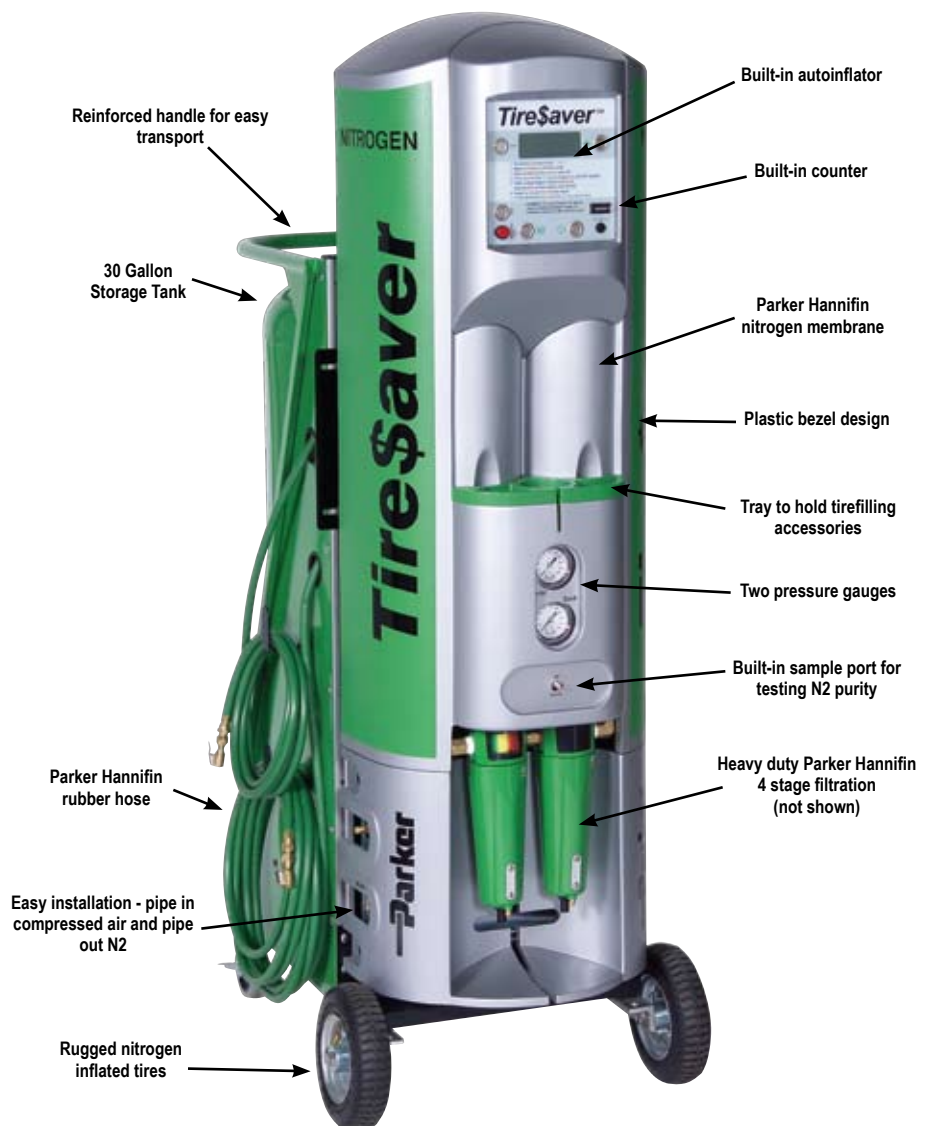
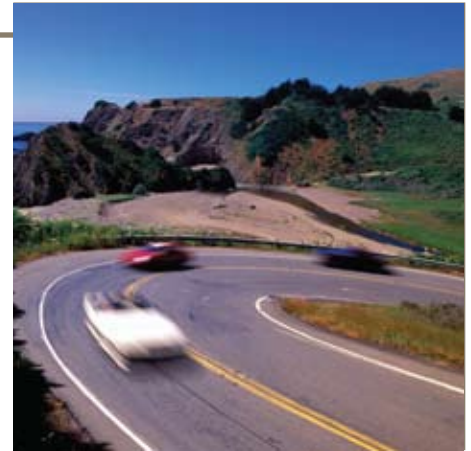


# Parker TireSaver™ Nitrogen Tire Inflation Systems

## 2.1 to 12.3 SCFM Models

### Generate Nitrogen On Demand

- Robust plastic bezel design eliminates any potential for damage from accidental contact with vehicle. Minimizes weight for easy portability
- Heavy duty Parker Hannifin (4) stage filtration provides contaminant-free compressed air. Includes carbon adsorption filter, a must have in any generator installation
- Built-in sample port for testing the purity of your nitrogen. Generators are set for 95% purity in tires, but produce purities up to 99%
- Built-in auto inflator purges and fills up to 6 tires simultaneously. Operator simply puts chucks on tires and sets pressure, then is free to do other work
- Includes nitrogen membrane produced by Cleveland, OH based Parker Hannifin, with expertise from over 10,000 nitrogen generator installations worldwide
- Includes 30 gallon storage tank with every portable generator
- Built-in counter to keep track of your nitrogen business
- Easy installation. Simply pipe in compressed air and pipe out nitrogen
- Rugged nitrogen inflated tires provide effortless portability in garage environments
- Parker Hannifin rubber hose, the highest quality available, for long lasting operation. Includes tire chucks and extra hose for spare tires
- Includes new long life battery to provide days of uninterrupted service on a single charge.
- Tray included to hold all tire filling accessories, including green valve caps, core removal tool and wind-shield labels



Model TS051-0ABCB



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# Parker TireSaver™

## Nitrogen Tire Inflation Systems

### Principal Specifications

Model	TS021	TS051	TS076	TS123
N2 Flow @ 97% purity, 145 psig, scfm	1.39	3.28	4.9	7.89
N2 Flow @ 95% purity, 145 psig, scfm	2.1	5.1	7.6	12.3
N2 Flow @ 97% purity, 101.5 psig, scfm	0.98	2.3	3.43	5.5
N2 Flow @ 95% purity, 101.5 psig, scfm	1.51	3.62	5.43	8.77
Compressed air pressure requirement, psig	100 - 145	100 - 189	100 - 189	100 - 189
Maximum compressed air pressure, psig	145	189	189	189
Compressed air temperature range	50°F - 104°F	50°F - 104°F	50°F - 104°F	50°F - 104°F
Ambient temperature	68°F	68°F	68°F	68°F
Nitrogen dew point	-50°F	-50°F	-50°F	-50°F
Ambient operating temperature	33°F - 110°F	33°F - 110°F	33°F - 110°F	33°F - 110°F
Max compressed air requirement, scfm	5.5	13	20	31
Compressed air prefiltration	2 stage including carbon adsorption	4 stage including carbon adsorption	4 stage including carbon adsorption	4 stage including carbon adsorption
Wall mount dimensions and weight	54"H x 18"W x 11"D, 140 lbs.	54"H x 18"W x 11"D, 140 lbs.	54"H x 18"W x 11"D, 140 lbs.	54"H x 18"W x 11"D, 140 lbs.
Tank (floor) mount dimensions	56"H x 26"W x 34"D, 300 lbs.	56"H x 26"W x 34"D, 300 lbs.	56"H x 26"W x 34"D, 300 lbs.	56"H x 26"W x 34"D, 300 lbs.
Portable dimensions	60"H x 20"W x 34"D, 250 lbs.	60"H x 20"W x 34"D, 250 lbs.	60"H x 20"W x 34"D, 250 lbs.	60"H x 20"W x 34"D, 250 lbs.
Inlet/Outlet connection	1/2" NPT / 1/2" NPT	1/2" NPT / 1/2" NPT	1/2" NPT / 1/2" NPT	1/2" NPT / 1/2" NPT
Noise level	<45 dba	<45 dba	<45 dba	<45 dba
Required annual maintenance	Filters	Filters and Carbon	Filters and Carbon	Filters and Carbon
Application	Motorcycles & Mini Cars	Cars & Light Trucks	Cars & Trucks	Full Vehicle Service
Annual Maintenance Kit	MKTS021	MKTS123	MKT1S23	MKTS123

### TireSaver Product Variations

Parker Part Number	N2 Analyzer	Auto-Inflator	Counter	Setup	Tank Size	Starter
TS021 - 0 A* B 0 A R**	Yes	Yes	Yes	Tank Mount	60 Gallon	Retail
TS021 - 0 A* 0 0 A R**	Yes	No	No	Tank Mount	60 Gallon	Retail
TS021 - 0 A* B C B R**	Yes	Yes	Yes	Portable	30 Gallon	Retail
TS021 - 0 A* 0 0 0 R**	Yes	No	No	Wall Mount	None	Retail
TS021 - 0 A* 0 0 B R**	Yes	No	No	Wall Mount	30 Gallon	Retail
TS051 - 0 A* B 0 A R**	Yes	Yes	Yes	Tank Mount	60 Gallon	Retail
TS051 - 0 A* 0 0 A R**	Yes	No	No	Tank Mount	60 Gallon	Retail
TS051 - 0 A* B C B R**	Yes	Yes	Yes	Portable	30 Gallon	Retail
TS051 - 0 A* 0 0 0 R**	Yes	No	No	Wall Mount	None	Retail
TS051 - 0 A* 0 0 B R**	Yes	No	No	Wall Mount	30 Gallon	Retail
TS076 - 0 A* B 0 A R**	Yes	Yes	Yes	Tank Mount	60 Gallon	Retail
TS076 - 0 A* 0 0 A R**	Yes	No	No	Tank Mount	60 Gallon	Retail
TS076 - 0 A* B C B R**	Yes	Yes	Yes	Portable	30 Gallon	Retail
TS076 - 0 A* 0 0 0 R**	Yes	No	No	Wall Mount	None	Retail
TS076 - 0 A* 0 0 B R**	Yes	No	No	Wall Mount	30 Gallon	Retail
TS123 - 0 A* B 0 A R**	Yes	Yes	Yes	Tank Mount	60 Gallon	Retail
TS123 - 0 A* 0 0 A R**	Yes	No	No	Tank Mount	60 Gallon	Retail
TS123 - 0 A* B C B R**	Yes	Yes	Yes	Portable	30 Gallon	Retail
TS123 - 0 A* 0 0 0 R**	Yes	No	No	Wall Mount	None	Retail
TS123 - 0 A* 0 0 B R**	Yes	No	No	Wall Mount	30 Gallon	Retail

\* - Change to 0 if handheld N2 Analyzer not required

\*\* - Change to 0 if Retail Starter kit is not required

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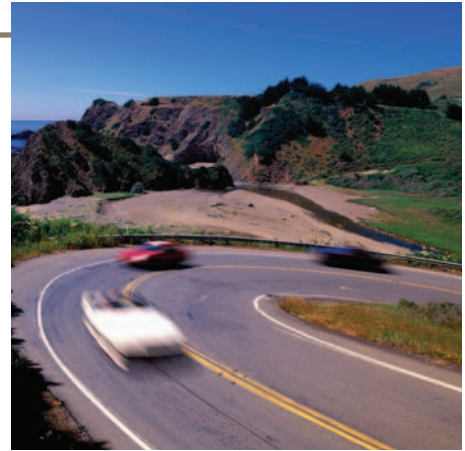


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# Parker TireSaver™ Nitrogen Tire Inflation Systems

## Accessory Items



Plastic Caps (2000)  
B04-0190



Chrome Caps (500)  
TS-CHVC-B



Plastic Cap/Sticker Pack  
TS-N2001G



Chrome Cap/Sticker Pack  
TS-N2001C



Separators  
C02-2367 (1/4")  
F602-12EJQ/MY (3/4")



Wall Mount Autoinflator  
TS89XDB-G



Trolley Autoinflator  
TS89TRL-4



Hanging Kits  
TS-4001G (Plastic Caps)  
TS-4001 C (Chrome Caps)



Rubber Hoses  
B04-0400 (12')  
B04-0401 (24')  
B04-0407 (35')



Digital Nitrogen Analyzer  
TS-02A



Nitrogen Storage Tank  
TS-30G (30 gal)  
TS-60G (60 gal)  
TS-120G (120 gal)  
TS-240G (240 gal)



Replacement Chucks (4)  
B04-0357



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# Point of Purchase Materials



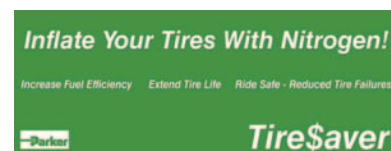
Trifolds (500)  
CPack-Tricar



Trifold Display  
TS-Displaycar



Window Decal (25)  
TS-Carlabel



TireSaver Banner  
TS-UB8



Tiresaver Poster  
TS-Poster



Buttons (25)  
TS-Buttoncar-25



Save Fuel Cards/Holder  
(200)  
TS-04-0073



Save Fuel Cards (1000)  
TS-81-0106



Retail Kit  
TS-SRTD

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