

TireLogic[®]

ISSUES & SOLUTIONS FROM GOODYEAR

Fall
2008

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GOODYEAR

Continuing On

FOR QUITE SOME TIME NOW, THIS SPACE HAS BEEN EXPERTLY FILLED BY **STEVE MCCLELLAN**. In his role as vice president of Goodyear's Commercial Tire Systems for the past five years, he provided the leadership that made Goodyear the standard for truck tires and service.

As many of you know, Steve was named president of Goodyear's North American Tire consumer business at the beginning of August. This is a tremendous opportunity for Steve and I'm sure he'll bring to that business the same passion and clear thinking that brought him success in commercial tire.



Joe Copeland
Vice President,
Commercial Tire
Systems

In almost any line of business, leaders will tell you that they put customers first. Not as many of them actually back that up. Steve did. Goodyear's segment-changing "cradle-to-grave" business strategy brought clarity of purpose to everyone in the company's truck business. The evolution to the business solutions model of fleetHQ is the next generation of focus on the customer.

I've been assigned the task of picking up where Steve left off as the new VP of Goodyear's commercial tire business. Most recently, I had been vice president of our off-highway businesses, including OTR, racing, aviation and motorcycle tires.

I don't feel the need to use the modifier "daunting" when referring to the task of following Steve, however. The talented professionals on his commercial team are still in place and are as engaged in the business – and in serving our customers – as ever.

To be sure, we'll have some challenges in front of us. Consumer confidence and economic pressure flow right through to the transportation industry. But as we work our way against the headwinds, there will be no change in strategy. Goodyear's Commercial Tire Systems will be the provider of business solutions for fleets of all sizes. We'll continue delivering great new products that anticipate and meet the needs of customers and end-users.

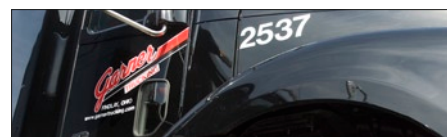
It's great to be part of the commercial tire business and I'm looking forward to following in the path that Steve has cleared.

Goodyear's Commercial Tire Systems will be the provider of business solutions for fleets of all sizes. We'll continue delivering great new products that anticipate and meet the needs of customers and end-users.

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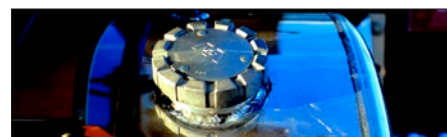
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Wingfoot Commercial Tire service technician Andrew Haegele tops off the air in the steer tire of one of Schneider's trucks.

SCHNEIDER NATIONAL REPRESENTS NOT ONLY A MAJOR CUSTOMER FOR GOODYEAR, THE LOGISTICS AND TRANSPORTATION SERVICES COMPANY ALSO PLAYS A KEY ROLE IN PRODUCT DEVELOPMENT BY TESTING NEW PRODUCTS FOR GOODYEAR'S COMMERCIAL TIRE SYSTEMS.

Before Goodyear's Fuel Max Technology was introduced formally, Schneider had tested Goodyear tires containing the tread compounds used in the Fuel Max tires. Such tests help Goodyear to understand how its latest fuel-efficient tread compounds perform in real-world conditions before they are introduced in new products. Plus, the tests give Schneider the benefit of previewing the absolute latest in tire technology.

The tire tests are part of a larger effort the transport company makes every year to run as fuel-efficient a fleet as possible. Every summer, Schneider National performs a Society of Automotive Engineers (SAE) Type II fuel economy test (SAE

Schneider Finds Goodyear Tires Pass the Test

J-1321). The company spends several weeks conducting the test on tires and other components.

Steve Graham, vice president of purchasing for Schneider, says for tires, company officials look at the company's fuel economy results when the tires are new and worn and compute an average. Then they take into consideration such factors as tread life, price of the tire and traction to determine which tire performs the best.

"What we found is that when our trucks were fitted with tires that contain the same compounds that are in Goodyear's Fuel Max Technology tires, we got a 4 to

5 percent improvement in fuel economy compared to the fuel economy results of trucks fitted with standard Goodyear line-haul tires," Graham says.

"A 4 percent savings in fuel economy for us translates into tens of millions of dollars in savings each year," he says. "That's an incredible improvement because that amount of savings easily pays for our tires for an entire year."

Graham says the company plans to specify all of its new trucks with Fuel Max Technology tires when replacing older units.

Continued on page 4



Schneider National's Mitch Windorff routinely consults with Wingfoot Commercial Tire sales manager John Parnell about the company's tire needs.

we've got Wingfoot, and when our guys need tires, they just push the button and out pops the tire they want — properly inflated, wheel in good shape, high-quality tire. Our guys don't have to worry about inventory.

"Then, they just wheel the old tires back and they're collected the next day for recycling (retreading or scrapping) when the Wingfoot guys come out to restock the machine," he adds. "That's ideal for us. We like the notion of our people changing the tires on the vehicles because they know which trucks need to meet company standards. Because it does vary based on application, on how long we intend to keep the truck, on a number of



very dynamic variables. Since we keep our associates in the loop on those dynamic variables, we like them bolting the tires on. Everything else we outsource to Wingfoot."

Mitch Windorff, tire system manager for Schneider National, says Wingfoot's mounted tire program is critical to the company's operation since it allows the company's mechanics and technicians to

concentrate on the jobs they were hired to do.

"We depend a lot on the expertise of the folks at Wingfoot to help us select the right tires and do the proper mounting and wheel inspections," Windorff says.

Pass the Test

Continued from page 3

Schneider National, a privately-held company, was founded in 1935 and currently operates 14,000 tractors and 40,000 trailers and has partnerships with more than 6,000 carriers. Schneider trucks travel more than 5 million loaded miles each day and serve more than 80 percent of the Fortune 500 companies.

Schneider National uses low-profile 295/75 R22.5 tires on its trucks, which link 36 terminals in North America. The company offers three types of services in several divisions: truckload, which includes bulk, one-way, dedicated, expedited and Western regional; intermodal; and logistics.

Each terminal has its own maintenance shop, where drivers not only can get

their assigned trucks serviced and refueled, but also can get the tires on their trucks checked and aired up or replaced, if necessary. The terminals keep supplies of mounted tires on hand so that the company's tire technicians can quickly replace tires as needed. Each terminal is served by the nearest Wingfoot Commercial Tire Center with a mounted tire program to replenish the company's supply of tires as they're used.

"It's like getting cans of ice cold pop from a pop machine on a hot summer day," Graham says. "Behind the tire machine,

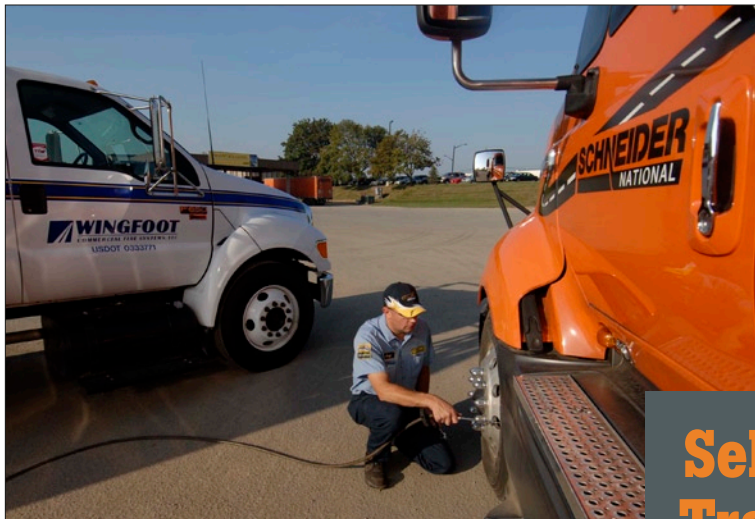


"Plus, we like the fact that we get consistently good service from Wingfoot Commercial Tire Centers across North America," Graham adds.

Schneider equips its trucks with the Goodyear Unisteel G395 LHS line-haul steer tires. Besides contributing to the company's fuel economy with its fuel-saving compound, the G395 LHS helps provide excellent traction, uniform tread wear and less damage from curb scuffing and other maneuvers.

On the drive position, Schneider runs the Goodyear G302 LHD, which is being phased out and replaced with the Goodyear G305 with Fuel Max Technology. Schneider's drive tires are retreaded by Wingfoot Commercial Tire Centers.

The drive tires run 12,000 to 13,000 miles per 1/32-inch of treadwear before the tires are pulled at around 6/32-inch to 8/32-inch tread depth (deeper in the winter, shallower in the summer) and retreaded for the drive position



or installed on the trailers. The trailer tires are pulled at 3/32-inch for evaluation and retreading.

Graham says Schneider aims to use as few tires as it can by running tires as long as possible. Many of the company's drive tires get up to 275,000 miles before they are removed for retreading and used as a trailer tire. Generally, if the casings are in good shape, they may be retreaded twice for use on the trailer position and run another 225,000

miles or more before being scrapped.

"We want to try to use as much of the tread as we can to get the full value of our tires without creating safety issues or ruining a good casing," Graham says. "Plus, a worn tire generally gets better fuel mileage than a new tire." 🌊

Self-Sealing Trailer Tire Inflates Savings

Starting this fall, Schneider National will begin using the new Unisteel G316 LHT trailer tire with DuraSeal Technology on 1,000 new trailers. Goodyear DuraSeal Technology uses a gel-like, solvent-free compound built into the inner liner of the tire. It consistently and instantly seals punctures up to 1/4-inch in diameter in the repairable tread area.

Steve Graham, vice president of purchasing, and Mitch Windorff, tire system manager, say they believe the DuraSeal Technology tires show a great deal of promise in benefiting their company's operation.

"If you take a look at our scrapped tires, a vast majority have a nail hole repair in them," Graham adds. "DuraSeal should make an impact in reducing the number of flats we receive on the trailer position." 🌊





One Man's Legacy

“WHAT WOULD VERN DO?”

When issues arise today, that's still a question on the tip of tongues at Garner Trucking. The company's founder and his business sense still carry some weight around here.

Passionate about the business of trucking, Vern Garner always carefully tracked fuel, tire and other operational expenses and made choices based on whether the company could make a profit and still exceed the expectations of customers. Through four decades, the former American Trucking Associations' chairman grew his small trucking company into a regional force.

James Husted, director of maintenance for Garner Trucking, which does business under the umbrella Garner



Transportation Group, says Vern instilled in everyone a sense of responsibility to the company's bottom line

as well as to the needs and expectations of customers. That legacy permeates the company even after death ended Vern's long battle with cancer last year, he adds.

Setting the Bar

"He set the bar for all of us," Husted says. "Vern was a very successful businessman, who led by example and taught all of us the business of trucking."

Husted says he is convinced Garner would be pleased with the company's continued success, some due to a longtime relationship with Goodyear Commercial Tires, but most of all the reliability of Goodyear tires and service. Reliability remains key since Garner's customers rely on the company's pledge: on-time, just-in-time deliveries.

Garner Trucking's fleet of 100 tractors include 85 late-model Freightliner Columbias and Cascadias and more than 250 Wabash trailers with 53-foot superwide and 48-foot by 102-inch storage vans help keep customer freight moving. The company uses low-profile 295/75R22.5 truck and trailer tires from its main terminal in

Findlay, Ohio, about 25 miles south of Toledo. The terminal has about 10,000 square feet of warehouse space and offers cross-docking capability.

Garner Trucking hauls raw materials, equipment and supplies to manufacturers and delivers finished products to warehouses and home improvement centers on as-needed or on a dedicated basis. Garner Trucking's parent company, Garner Transportation Group, also provides loading support, public warehousing and logistics management services.

"One of our biggest customers, a leading U.S.-based home improvement center, requires us to maintain at least a 99.2 percent on-time delivery rate," Husted says. "Our company recently received recognition from the company since we've been able to maintain a 99.9 percent on-time delivery rate."

Husted credits the outstanding performance of Goodyear's tires and service from Spark's Commercial Tire Inc., a Goodyear independent dealer, in helping Garner Trucking achieve on-time performance and cost controls.

"The longer we can keep tires on our vehicles, the more we can control our costs while still offering our customers the reliable service they've come to expect," he adds.

More Miles to Removal

Garner Trucking equips its trucks with the Goodyear UniSteel G395 LHS line-haul steer tire, which helps provide excellent traction, uniform tread wear and less damage from curb scuffing and other maneuvers.

Husted says Garner Trucking's G395 LHS line-haul steer tires run 12,000 to 14,000 miles per 1/32-inch of treadwear – or up to 142,000 miles – before the tires are pulled at 6/32- to 8/32-inch tread depth, remounted and installed on the trailer. The tires are then pulled at 4/32-inch for retreading. The company uses an aggres-

sive 30/32-inch G372A LHD drive retread on the steer tire casing. At 4/32-inch tread depth, the tire may retread again with a G316 LHT trail tire tread and mounted on the trailer. When worn, the steer tire casing can be scrapped.

Because the company's trucks operate primarily in northern climates, Garner Trucking specifies its drive tires with deep-lug Goodyear G372A LHD tread for long life and superb traction.

"With some of our Goodyear tires, we're getting upwards of 400,000 miles in the drive positions, with many of them going past the 250,000-mile mark on retread mileage," Husted says. "Then, we get additional mileage on the trailer from the third retread."

Husted says two factors contribute to Garner Trucking's high tire mileage and low cost-per-mile basis: retreading and routine monitoring of inflation pressures and tread wear by Mike Foust, a sales representative for Sparks Commercial Tire.

Moreover, Garner drivers inspect truck tires daily and its tire maintenance technician conducts weekly lot inspections of trailer tires at the company's main terminal. The technician inflates tires and removes tires for retreading or wear. Foust visits twice weekly to retrieve worn tires, deliver new and retread tires and address any tire-related issues the company drivers or tire maintenance technician encounters.

Garner tires are retreaded by Goodyear's patented seamless UniCircle process, which enhances traction and reduces costly tearing and chunking because the new treads adhere snugly. UniCircle also uses an exclusive compound and new-tire tread designs, allowing retread performance and mileage to mirror that of new tires.

"Using retread tires is something that's fairly new for us," Husted says. "When Goodyear and the folks at Sparks first suggested it, our drivers were very skittish.

But we're certainly pleased with their performance and how they've lowered our costs."

Husted says he's also pleased with the new UniSteel G316 LHT trailer tires with DuraSeal Technology, which Goodyear introduced earlier this year. DuraSeal Technology uses a gel-like, solvent-free compound built into the inner liner of the tire. It consistently and instantly seals punctures up to ¼-inch in diameter in the repairable tread area.



Garner Trucking's James Husted, left, counts on Goodyear dealer tire rep Mike Foust.

Husted says DuraSeal tires help the company cope with the unique challenges of a "hook-and-drop" operation. "A empty trailer can sit for days or weeks before it's used," Husted says. "Tread punctures caused slow air leaks that were undetectable until the trailer was loaded and running. Then, drivers were calling in for a repair."

Keep on Rolling

"By equipping some of our company trailers with new Goodyear DuraSeal trailer tires, we've already gone from an average of two service calls per week to two per month (a 75 percent reduction)," he says.

He estimates that once all company trailers are running on DuraSeal tires, Garner will save about \$60,000 in annual tire-related service costs. "That's why we will only buy DuraSeal tires for our trailers," he adds.

"Goodyear tires give us consistency," Husted says. "We know that we're getting reliability, innovation and value with Goodyear. Plus, we get unbeatable service and knowledgeable advice from Spark's Commercial Tire. It's a combination that would certainly make Vern proud." 🇺🇸

Tire Maintenance Easy as 1, 2, 3

Five tips to control

WITH TIRES AS THE SECOND HIGHEST OPERATING COST

AFTER FUEL, A SOLID TIRE MAINTENANCE PROGRAM CAN HELP REAP SOLID DIVIDENDS. "IT COULD ADD THOUSANDS OF DOLLARS TO YOUR BOTTOM LINE, THANKS TO LONGER TREAD LIFE AND MORE RETREADS DOWN THE ROAD," SAYS GOODYEAR COMMERCIAL TIRE MARKETING COMMUNICATIONS MANAGER, TIM MILLER. "ADD IN GOOD DRIVING HABITS – SMOOTH ACCELERATION, BRAKING AND STEERING – AND YOU HAVE THE RECIPE FOR LOWER MAINTENANCE AND TIRE COSTS."

Miller has five tips for controlling tire and vehicle costs:

1 Tire Inflation Pressure

The top priority is maintaining tire inflation pressure. Premier fleets that conduct tire surveys find more than 95% of their tires are within tire inflation specifications. They check tire pressures when trucks are in for service; their drivers check inflations at least once a week;



and it's common for their tire representatives to help them with yard inflations and checks. Moreover, premier fleets don't use thumpers; only calibrated tire gauges will do. Studies have shown that thumpers give you a false sense of security.

Harvey Brodsky, from the Tire Retread Information Bureau has held many tire thumping contests to see if drivers can accurately tell if a tire is underinflated. The result? "Trying to determine how much air is in a tire by thumping is the same as trying to determine if a truck's engine needs oil by thumping the hood," says Brodsky. "In a recent contest, only one out of more than 50 participants was able to guess the tire with the correct amount of air.

"The only way to properly check the air pressure in a tire is with a properly

calibrated tire gauge," Brodsky continues. "Anything else is just a guess, and one that can be very expensive if the thumper guesses wrong. Tires that are run underinflated stand the risk of not being retreadable after the initial tread is worn off."

A Technology and Maintenance Council (TMC) tire-failure study showed that under-inflation caused 90% of all tire failures. Under-inflation causes tires to flex more as they travel and generate rubber-damaging heat inside the tires. A tire under-inflated by 20% loses 30% of its life. When inflation drops 40% below the recommended level, the tire lasts only half as long.

Knowing the proper inflation level for your truck tires is crucial. TMC Recommended Practice (RP) 235 states the following determines the correct air pressure for a given load:

Performance Made , 3 (4 and 5)

Control your tire costs

- Tire size and load rating
- Weight carried on each axle
- Number of tires on each axle
- Maximum speed the vehicle travels during its operation

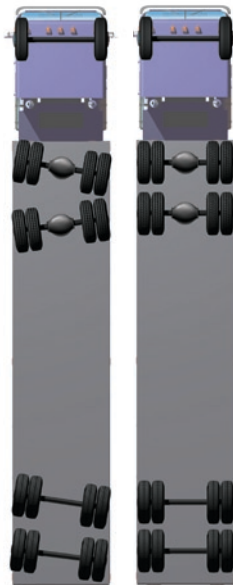
(Note: Your tire manufacturer's data book or the Tire and Rim Association's Yearbook, provides load, speed and inflation tables for a given size and type of tire.)

Whatever you do, don't guess on tire inflation pressures. Tire dealers can help calculate the correct numbers to carry the load. Armed with proper inflation pressures for your trucks, you can maximize the performance engineered into your tire.



2 Periodic Tire Inspections

A pre-trip inspection can help catch a lot of issues that can lead to downtime and premature tire life down the road. Visually inspect the tread and sidewall of all the tires for obvious under-inflation and objects that may be lodged in the tread or sidewall. Examine the tread and feel the rubber with your fingertips for imperfections, irregular wear pattern or feathering of the tread blocks. Fingertips are very sensitive to changes in patterns and unusual wear.



3 Total Axle Alignment

When your truck runs straight down the road, the chances of fast or irregular tire wear are minimized. A traditional front-end alignment is insufficient. Drive axles must be inspected to ensure that they are perpendicular to the chassis, and for tandem axles, parallel to each other. If drive axles are out of alignment, drivers must constantly turn the steer tires right and left to keep the truck tracking straight down the road. Fast steer-tire wear results.

Out-of-alignment trailer axles similarly can wear tractor steer and drive tires as well as trail tires.

4 Worn Components

To make the most of a realignment, technicians should check for worn king pins, bearings and steering components. Before checking axle alignment, tolerances for each component must be in spec. Excessive movement in any component helps lead to fast and irregular tire wear.

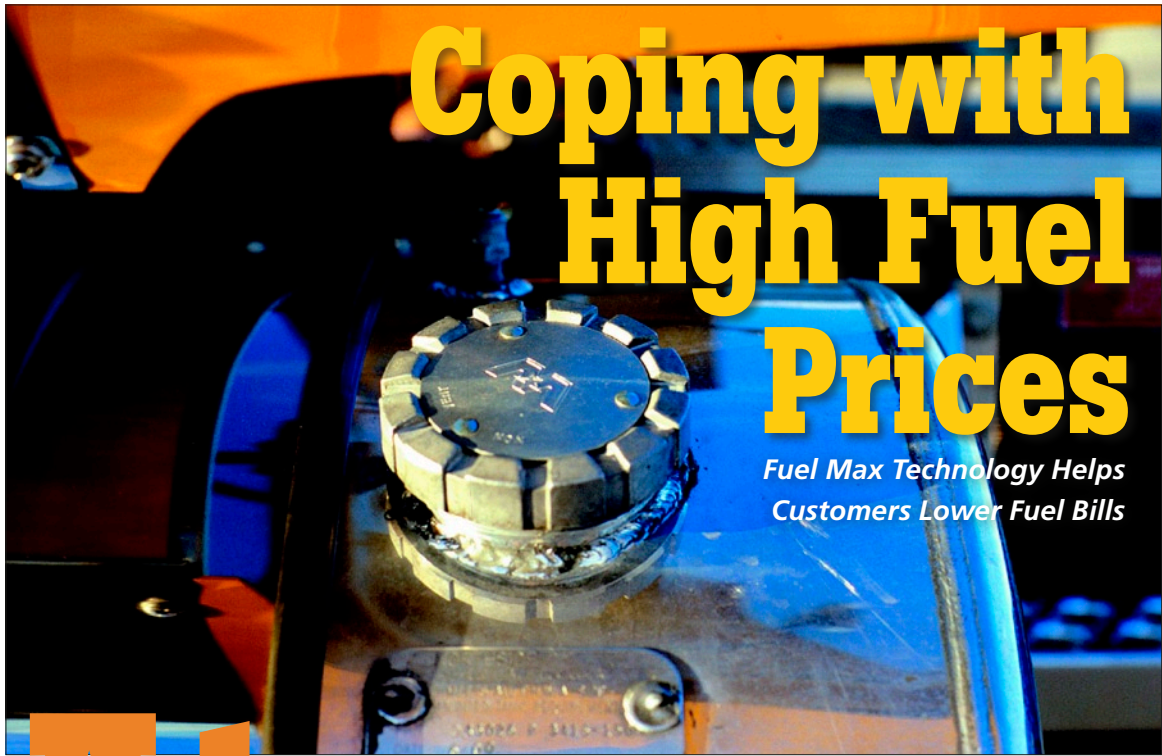
In addition, shock absorbers should be inspected for wear. A worn shock is an open invitation for irregular wear patterns. Air-ride suspension make it paramount that the shocks are adequate for the job and are replaced when worn.

5 Rotate Tires to Maximize Casing Life

Tires should be rotated, particularly in slow wear-rate situations, for more miles to removal. If you own trailers, it's recommended that you remove steer tires at 6/32nds to 8/32nds and run them on your trailer axles down to 4/32nds to achieve optimum uniform wear prior to retreading. Retreaded steer tires should be moved to the drive axles and run to 4/32nds. At that point, the second retread can be installed on the trailer.

Meanwhile, you should remove new drive tires at 4/32nds in line-haul service. The first retreads can be re-installed on the drive axle; the second retreads can be used on the trailer.

For tires in a mixed-service application or in situations where stones are stuck in the grooves, continuous inspections are necessary for possible tire damage. In these cases, drive tires should be removed for retreading at 6/32nds. Trailer tires should be retreaded at 3/32nds to 4/32nds. First retreads can be run as drive or trail tires, while second retreads should only be used as trail tires. 🏠



Coping with High Fuel Prices

Fuel Max Technology Helps Customers Lower Fuel Bills

The three fuel-efficient tires featuring Fuel Max Technology are the Unisteel G395 LHS steer tire, the Unisteel G305 LHD drive tire and the Unisteel G316 LHT trailer tire in standard (11R22.5) and low-profile (295/75R22.5 and 285/75R24.5) sizes. Goodyear also offers UniCircle and precure retreads with Fuel Max Technology.

To get the maximum benefit, Goodyear recommends outfitting your trucks with Fuel Max Technology tires in all positions. "Just as we have recommended that truck

At GOODYEAR, WE HEAR IT FROM FLEET MANAGERS ON A DAILY BASIS. "WHAT CAN WE DO TO IMPROVE FUEL ECONOMY? HOW CAN WE CUT COSTS? HOW CAN WE BETTER MANAGE OUR TIRE PROGRAM?"

"We like to see those questions," says Dave Beasley, Goodyear's director of sales. "Especially from new customers, who haven't been exposed to Goodyear's fuel saving technology, or the tire management programs we have in place, which can save our customers thousands of dollars. We feel we're in a great position to lower fuel bills and take our customers' tire program to a new level, when it comes to lower cost-per-mile."

From a tire technology standpoint, Goodyear touts its Fuel Max tires, which, under SAE Type II tests conducted under ideal conditions, showed an 8% improvement as compared to standard Goodyear tires. Allowing for driving condition variables, Goodyear says most fleets can expect up to a 4% in improved fuel economy when using Fuel Max tires in all wheel positions.

For a truck that normally gets 6 miles per gallon, the increase to 6.24 mpg with Fuel Max Technology would produce a saving of up to \$3,000 in fuel per year—assuming the truck is driven 120,000 miles annually and fuel costs \$3.90 per gallon.

A key element of Fuel Max Technology is reduced tire rolling resistance. Goodyear discovered that tread design, depth and compound accounted for more than half of a truck tire's rolling resistance.

"Our analysis focused on increasing resiliency and reducing heat buildup in our treads," says Tim Miller, Goodyear's commercial tire marketing manager.

"The key component was in the compounding. We were able to get our tires to 'reflect' off the road better which lessens rolling resistance. Casing construction and tire manufacturing were also optimized to reduce fuel consumption, (see *Going the Extra Mile for Quality*, pages 12-13). The net result was a significant improvement in fuel economy."

operators mount Goodyear tires in all positions to help get the lowest cost per mile, we suggest the same strategy in using Fuel Max Technology tires," says Beasley. "The result will be top mileage, more retreads per casing, cost savings and improved fuel economy. That's a winning combination."

Fuel Max Calculator Computes Fuel Savings



To learn how much you might be able to reduce your fuel bill by running tires with Fuel Max Technology, go to <http://www.goodyear.com/truck/technology/calculator.html>

This allows you to type in fleet information such as average

annual mileage per truck, average miles per gallon and number of trucks in your fleet, plus cost of fuel per gallon. You can also fill in your current tire information including cost per position and average removal miles. Then the calculator computes your savings based on the information you provided.

Fuel Max Lineup

G395 LHS Steer Tire

The UniSteel G395 LHS not only is great in fuel efficiency, but also it features long and uniform mileage performance and a robust casing. The tire features a four-belt package casing design with three inner steel belts topped by a belt of polyamide, which protects against moisture and reduces “tread squirm” in the tire “footprint” during cornering.

The G395 LHS features a five-rib design that provides an optimal footprint and exceptional performance through each stage of wear.

Another feature is the tire’s pressure distribution groove. Located on the outer shoulder rib, the pressure distribution groove bottom has a large radius that reduces pressure buildup. Shoulder wear is improved, and irregular wear and cupping are minimized. The result is improved traction and handling over the tire’s life.

G305 LHD Drive Tire

In the drive position, the UniSteel G305 LHD featuring Fuel Max Technology offers a balance between higher miles-per-gallon and lower cost-per-mile in both new tires and retreads. The tire’s fuel-efficient tread design, compound blend and casing construction help enhance fuel economy and Goodyear’s four-belt package aids in long tire life in line-haul applications.

The drive tire features 26/32-inch tread depth, and its large, stable blocks help minimize “tread squirm” on the roadway for improved fuel economy, confident handling and even wear. While the tire has less tread per 32nd than Goodyear’s standard long haul tire, the trade out in improved fuel economy more than makes up the potential loss in overall tread life.

That’s because drive tires, hauling single trailers, impact nearly half of a vehicle’s tire rolling resistance.

Two circumferential and extended lateral grooves, coupled with a non-evolving tread design, provide exceptional traction in all weather conditions. A closed shoulder further helps promote even tread wear.

Goodyear also offers Fuel Max Technology for drive tire retreads as the G305

UniCircle with 24/32-inch tread depth. In addition, the G305 pre-cure retread is available in 22/32-inch tread depth.



G316 LHT Trailer Tire

The trailer position accounts for approximately 41% of a tractor-trailer’s rolling resistance. That figure climbs to 62% for rigs hauling double trailers. Goodyear’s UniSteel G316 LHT is therefore a critical piece in delivering fuel efficiency and good mileage.

The tire uses a cool-running, triple-compound construction that helps reduce energy generated within the tread. The casing features an all-steel four-belt package for a solid foundation for multiple retreads.

A solid shoulder rib and innovative pressure distribution groove – borrowed from the G395 LHS steer tire – help resist shoulder wear. Two circumferential grooves and lateral grooves provide steady performance in all types of driving conditions. The G316 LHT tire and matching UniCircle and pre-cure retreads are offered at 12/32-inch deep tread for more miles to removal. 🇺🇸

Tips for Improving Fuel Efficiency

Here are some factors for truck operators to consider to maximize fuel efficiency:

Operating Practices - How the truck is driven has a huge influence on fuel efficiency and can also impact tire life. The higher the average speed, the faster the tread will wear. Speed also impacts fuel efficiency because the truck requires increasing amounts of horsepower to travel faster. Goodyear research has shown that every 5 mph increase over 55 mph reduces fuel economy by 8%.

Retreads - When retreading, you can choose to spec a more fuel-efficient tread. A well-managed casing may be retreaded three or four times. Each time, you should choose the tread that best suits your goals in the intended tire position.

Alignment and Rotation - Keeping your tires running straight as possible can save both in fuel mileage and tread life. If you aren’t already doing so, set up a regular alignment program for all your trucks. Also, rotate tires to specified schedules. It’s a good way to fight irregular wear, which can quickly get out of hand. Watching for variation in tread depth between lug tires is most important.

Inflation - From a maintenance standpoint, proper inflation pressure is the most important thing you can do to improve fuel efficiency. Goodyear research has shown a 1% drop in fuel economy with every 10 psi drop in tire inflation.

To fully understand the impact of these tread choices, it’s important to survey tires and analyze the data regularly. Software like Goodyear’s TVTRACK makes it easy to compare performance and costs with a few mouse clicks.

“If you really want to get serious about rooting out unnecessary costs in your tire program, TVTRACK is one tool that can really help,” says Goodyear’s Beasley. “It will give you the big picture - and that’s important when you are trying to deal with a variable like fuel costs.” 🇺🇸

Going the Extra Mile for Quality

AFTER MARK BEYER SAW TO WHAT LENGTHS GOODYEAR'S TIRE PLANT IN DANVILLE, VA., GOES TO ENSURE QUALITY IN ITS MANUFACTURING PROCESS, THE REGIONAL TIRE CENTER MANAGER FOR CENTRAL TRANSPORT SAYS HIS MIND WAS MADE UP.



Central Transport Tire Center Manager Mark Beyer believes in the quality of Goodyear tires after touring the company's Danville, Va., plant.

"At that moment, I decided our company would go exclusively with Goodyear tires for our entire fleet," Beyer says.

Beyer is responsible for managing the company's four regional tire centers in the United States, which consists of 2,200 tractors and 11,000 trailers. Central Transport is a less-than-truckload carrier

based in Warren, Mich., and serves customers in the United States and Canada.

"We've always had great results with Goodyear tires. They manufacture quality tires that offer a good value through long tread life and excellent retreadability," Beyer says. "That value helps Central Transport lower its tire costs. And Goodyear really shines with its team-approach to solving our company's tire issues."

But the icing on the cake for Beyer was the attention the company pays to quality control throughout the entire manufacturing process.

Before Beyer started working for Central Transport, he owned and managed an independent commercial tire dealership for 10 years. Grounded in this experience, Beyer says he knows how strict quality control measures can result in optimum tire performance and wear.

"To witness the quality control measures that Goodyear has established from the beginning of the tire manufacturing process all the way to the end convinced me that Goodyear was the right choice for our company," he adds. "In my opinion, the folks at Goodyear are doing all the right

things particularly with their quality control measures and their willingness to address customer concerns."

America's largest tire maker has always been a leading manufacturer of premium tires, says Jerry Riddle, product engineer at the Danville plant. By investing time and money in stricter quality control measures and an improved tire screening process, the company improves its consistency in tire



manufacturing as well as in tire evaluation. That means engineers can more quickly identify potential weaknesses in the manufacturing process long before they show up as issues for Goodyear's customers, Riddle says.



"We've always had great results with Goodyear tires. They manufacture quality tires that offer a good value through long tread life and excellent retreadability,"
— Mark Beyer

Oscar Song, quality and technology manager at the Danville plant, says additional screening equipment also helps the company develop and produce leading-edge products, like the company's Fuel Max Technology tires, more consistently.

Having an IMPACT on Quality

Goodyear has worked hard and made significant strides over the last 10 years in enhancing ride by ensuring consistent quality in its manufacturing process. Five years ago, Goodyear introduced IMPACT (Integrated Manufacturing, Precision Assembly, Cellular Technology), with its

new Unisteel G395 LHS line-haul steer tires. More than five years in development, IMPACT uses revolutionary manufacturing technology to improve tire building precision, to increase manufacturing efficiency and to reduce production costs. It integrates component formation and assembly, automated tire assembly and curing within a cellular system.

At the heart of IMPACT is the "hot former," a unique calendaring system that produces and forms 12 of a truck tire's 23 components in a continuous manufacturing

system. Engineers at the company's Akron technical center designed the device, for which the company holds six U.S. patents.

With the significant improvements in productivity and quality brought about by IMPACT, Goodyear continues to make significant strides in improving overall quality. Still, Song says, the tire manufacturing process encounters challenges, so the company does not rest on its laurels.

Taking the Quality Initiative Global

As part of a company-wide program called Global Quality Initiative, the Topeka, Kansas, and Danville facilities installed new, more sensitive equipment to detect minute

variations in tire uniformity. The plants also adopted strict auditing processes to make sure the machines operate at peak efficiency. The new equipment, which includes sophisticated X-ray machines and lasers, checks tires against strict measurement

standards including radial and lateral force variation, radial and lateral runout, and sidewall appearance. The machines can also measure the balance of tires, which help increase tire life and fuel economy.

So far, the company has invested nearly \$300 million adding these more sensitive inspection machines and auditing processes to 35 manufacturing facilities worldwide, says Dave Roule, Goodyear director of global process quality and auditing. The investments are paying great dividends.

"What we're trying to accomplish is the production of tires that are consistently the best in the world," Roule says. "We want our customers and dealers to feel confident that Goodyear tires are number one in quality." 🇺🇸

Q&A

Fuel Economy Questions Unveiled

HAVE A BURNING QUESTION REGARDING TIRES OR NEED A SUGGESTION TO IMPROVE YOUR TIRE MAINTENANCE PROGRAM? HERE'S YOUR FORUM! SEND YOUR QUESTIONS TO GOODYEAR'S ANSWER MAN, TIM MILLER.

REACH HIM AT TIMOTHY.MILLER@GOODYEAR.COM AND HE'LL REPLY IN TIRELOGIC OR PERSONALLY VIA EMAIL.



Tim Miller

Q. How fuel-efficient are Fuel Max tires compared to standard Goodyear commercial truck tires?

A. According to SAE fuel consumption tests, the Goodyear Unisteel G395 LHS, G305 LHD and G316 LHT featuring Fuel Max Technology tire combination helps decrease fuel consumption by 8%* in comparison with a combination of Goodyear standard production tires. Through the SAE testing process, Goodyear was able to virtually eliminate outside factors that influence fuel usage to quantify the fuel efficiency of the Fuel Max tires. Since trucks are affected by everyday factors like temperature, weather, terrain and traffic, fleets can expect up to a 4%* fuel savings in a real-world fleet operation.

**Your results may vary based on road and hauling conditions.*

Q. Which tire is better, one that advertises fuel efficiency or long mileage?

A. Each fleet has different needs. We suggest testing both tires on the trucks in a fleet. But instead of just measuring fuel economy, also figure out the total cost per mile for the entire life of the tire

Q. Do tires get better fuel economy as they wear?

A. As the tread on a tire wears down, fuel efficiency improves. Just make sure you don't run your tires below a recommended tread depth or you could sacrifice traction, handling and retreadability. The right inflation pressure and load will also help improve fuel economy.



You've Got Questions?

We've Got Answers.

Q. What impact will the Unisteel G305 LHD featuring Fuel Max Technology's shallower tread depth have on fuel efficiency and cost per mile?

A. The Unisteel G305 LHD featuring Fuel Max Technology has a 26/32-inch tread depth which helps reduce the tire's rolling resistance. This shallower tread depth could potentially decrease the tire's original tread life and slightly increase the cost per mile. However, the fuel savings gains should more than make

up for this loss. A fleet's potential return on investment can be determined using Goodyear's [Fuel Savings Calculator](#), which takes the drive tire's original 26/32-inch tread depth into account. 🇺🇸





From up here, we see

the only self-sealing tire technology

that helps deliver the goods.



There's no time for downtime.

Minimizing down time is important to you and your customers, so help keep your trucks up-and-running with the Goodyear Unisteel® G316® LHT™ featuring DuraSeal Technology®. It's the first long haul trail tire to incorporate a built-in tire sealant. Proven on and off the road, DuraSeal Technology quickly seals up to 1/4-inch diameter tread punctures* to help your trucks get to their destinations on time. The Unisteel G316 LHT featuring DuraSeal Technology can usually be retreaded multiple times with Goodyear retreads to help extend their use and help save you money. Contact your local Goodyear Dealer for more information.

www.goodyear.com/truck



*Seals 1/4-inch punctures only in the repairable area of the tread. Does not seal sidewall punctures.

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