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NASCAR Racing
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Mike Siberini started working with Goodyear in 1999 as a PR rep with the NASCAR Craftsman Truck Series, followed by a move to Sprint Cup in 2001. He also does freelance production work with FOX, ABC/ESPN and TNT. Prior to his PR start with NASCAR in 1997, Siberini also plied his trade with several professional soccer franchises.



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Lee Elder, a 1979 graduate of San Diego State University with a degree in journalism, has worked with the Goodyear Racing public relations team since 2001, where he focuses on PR for a variety of racing venues. He had been sports director of two radio stations, sports editor of two newspapers and spent six seasons as media coordinator for NASCAR's Southwest Tour.

The Goodyear Tire & Rubber Company, 1144 East Market Street, Akron, OH 44316

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Stu Grant - General Manager, Global Race Tires Iowa State (1972); Joined Goodyear: 1972

Stu joined Goodyear after graduating from Iowa State with a degree in chemical engineering...After a year with aircraft tire development, he moved to Goodyear's racing division in 1973 as a racing tire engineer... Named chief compounder in 1978...In 1983, Stu was named manager of racing tire development programs, where he worked until transferring to passenger tires in 1991 and then to Kelly-Springfield as marketing manager of light truck tires...Stu returned to racing in 1994 as director of racing tire sales and marketing...In February 1996, he was named general manager of global race tires.



Rick Campbell - Project Manager, **Tire Development, NASCAR** 

College of Wooster (1979); Joined Goodyear: 1979

Rick joined Goodyear race tire development after graduating from the College of Wooster with a degree in chemistry...His early tire experience includes stock cars and Formula One...As group leader for stock cars in 1987, Rick was instrumental in Goodyear's success through two tire wars in 1988-89 and in 1994...Named chief compounder for all of Goodyear's motorsports programs in 1996 and, in 1997, he was named chief engineer for the IRL series...Rick went back into NASCAR as team leader in 2000 and broadened his responsibility in 2008 to project manager tire development, NASCAR.



**Greg Stucker – Director, Race Tire Sales** Vanderbilt University (1979); Joined Goodyear: 1979

Greg joined Goodyear in 1979 following his graduation from Vanderbilt University with a degree in mechanical engineering...After a year on the technical squad, he joined the racing division in 1980, moving from short track and NASCAR tire development to group leader for Indy cars in 1983... In 1986, Greg was named chief engineer in racing... Following three years in original equipment passenger tire engineering, he returned to racing in October 1998 as manager of race tire product development...Greg was promoted to director of race tire sales and marketing in October 2000 and director of sales in 2007.



Dave Auffenberg - Project Leader, Tire Development, Drag, Sports, Dirt Purdue University (1985); Joined Goodyear: 1985

Dave joined Goodyear in 1985 in dirt racing and Formula One after graduating from Purdue University with a degree in chemical engineering...Dave moved to the stock car group in 1987, where he worked for three years during a tire war...Dave worked with the CART series starting in 1990, was made group leader of dirt, drag and bias-ply tires in mid 1993, then was named chief engineer over stock car, sports radial, supercar and bias-ply tires in 1997...Dave's focus as project manager in 2010 remains on drag, sports and dirt tires.



**Dave Leffler – Director Race Operations** The Ohio State University (1980); Joined Goodyear: 1990

Dave graduated from the Ohio State University with an MBA in finance and joined Goodyear in 1990 after working 10 years in various financial positions with transportation and management consultant firms...Since joining Goodyear, Dave has held a variety of positions within Goodyear's finance organization, including Director, Financial Planning & Analysis, North American Tire, and Finance Director for Goodyear's off-highway business...Dave joined Goodyear Racing in 2008 and serves as a focal point for finance/operations and marketing.



#### Carolyn Ashbee - Sales Account Manager, **Drag Racing**

University of Akron (1977); Joined Goodyear: 1972

Carolyn joined Goodyear in 1972 as a high school senior and worked in Goodyear Racing while pursuing a degree in data processing at the University of Akron...Carolyn worked in various positions in the racing group, including covering the SCCA and IMSA sports car series...In 1994, Carolyn transferred to the NASCAR stock car group, handling the Busch Series and the Northwest and Southwest tours...In 2002, Carolyn took the reins of drag racing.



Justin Fantozzi - Marketing Manager, Racing University of Cincinnati (1998); Joined Goodyear: 1998

Justin joined Goodyear's racing division after graduating from the University of Cincinnati with a degree in chemical engineering...Named marketing manager in 2007...Prior positions include field sales manager for stock cars, as well as dirt and asphalt short track racing...His racing career also includes tire compounding and tire design in the sportscar, dirt, and open-wheel venues...Justin received an MBA in marketing from the University of Akron in 2002.



#### Chad Fletcher - Sales Account Manager, **NASCAR Camping World Truck Series and NASCAR Touring Series'**

University of Virginia (1991); Joined Goodyear: 2002

Chad graduated from the University of Virginia with a degree in business and public administration and communications...His first assignment after joining Goodyear in 2002 was marketing manager for the NASCAR Busch Series and Touring Series operations...Chad added the Camping World West Series in 2003, the Camping World East Series and Mexico Corona Series in 2006, and the Canadian Tire Series in 2007...In 2008, Chad's responsibilities transitioned to the Camping World Truck Series and continued with the NASCAR Touring Series.





**Sprint Cup Series** 

Western Illinois University (1985); Joined Goodyear: 1985

Rick joined Goodyear's retail store division in 1985 after graduating from Western Illinois University with a degree in business...Rick moved to Goodyear's headquarters in Akron in 1990 as an accountant in retail operations and after three years he was named the operations manager for the Commercial Tires Centers...He joined the Goodyear racing division in 2002, where he managed the distribution and service of race tires for Nascar's top three divisions...In 2008, Rick became the sales account manager for the NASCAR Sprint Cup Series.



Scott Junod - Sales Account Manager, **Short Track Racing** 

Iowa State (1985); Joined Goodyear: 1985

Scott joined Goodyear after graduating from Iowa State University with a degree in industrial engineering and started his Goodyear career in medium commercial truck sales and marketing...Scott held various positions in human resources and industrial engineering, and has worked in several production facilities...Scott joined Goodyear Racing in 2007 as sales account manager for short track racing...Scott also holds a Juris Doctorate degree from the University of Akron and is a member of the Ohio Bar Association.



Mark Keto – Lead Engineer, Stock Car Racing Penn State University (1996); Joined Goodyear: 1996

Mark joined Goodyear's racing group to work with the sports car tire development team after graduating from Pennsylvania State University with a degree in chemical engineering...By early 1997, he shifted to the NASCAR group, working as a tire compounder... In October 2001, Mark was named lead engineer of the NASCAR group.



Tire Development, Drag Racing, **Sports Car, Dirt Racing, Short Track** 

University of Akron (2000); Joined Goodyear: 2000

Chris joined Goodyear's drag racing group as a tire designer after graduating from the University of Akron with a degree in mechanical engineering...In the fall of 2003, Chris transferred to Goodyear's NASCAR advanced engineering group to work on technology development programs...He was named lead engineer of that same group in the spring of 2004...In January of 2010, he was named the lead engineer for Goodyear's drag racing, sports car racing, dirt racing, and short track racing programs.



Steve Rigot - Sales Account Manager, **NASCAR Nationwide Series** 

Gardner-Webb University (2004); Joined Goodyear: 1996

Steve joined Goodyear in 1996 and since then has held various positions at Goodyear's Statesville plant, including mold technician, crew leader, manufacturing planner/scheduler and business team leader...In 2005, after earning a degree in business administration from North Carolina's Gardner-Webb University, Steve was promoted to mold plan coordinator for all consumer and race tire molds and moved to Akron...In 2007, he became team leader of the Applied Physical Metrology lab...Steve joined the Goodyear Racing team in 2008 as sales account manager with responsibility for the NASCAR Nationwide Series.



#### **Bob Shaffer - Sales Account Manager, Sports Car Racing**

University of Akron (1967); Joined Goodyear: 1967

Bob joined Goodyear in 1967 after graduating from the University of Akron...In 1971, he was named assistant field manager for sports car racing and has since held field manager positions in drag, motorcycle and sports car racing...Presently, Bob is responsible for Goodyear's marketing efforts surrounding sports car racing.

Goodyear Comes Together

The Formula for Success

As you would expect, I am as proud of Goodyear's long and successful history in racing as any of our associates. Our heritage comes to life in front of millions of fans every weekend, on tracks and racing strips all across North America. But while everyone can see our tires in action, few get to see all that happens before the first tire is mounted at the track.

In my view, the success of Goodyear racing is not simply how our tires perform. On a much larger level, our success is an example of what we can accomplish when we come together and meet a challenge. The wins we've had on the track are a direct result of the way we work together, find innovative solutions, research and test our products, and seek input from anyone who can add value to our processes.

During the 2009 racing season – particularly in NASCAR – we were tested in a variety of ways. Through it all, I saw three critical

elements that kept us focused on the job at hand.

Ownership – Our name is on the tires, and we took it upon ourselves to find the right tire for every track, every week. We didn't point fingers or look for excuses.

Unrelenting Pursuit – We never accepted "close" or "good enough." This speaks to Goodyear's commitment to racing. From the leaders of our racing division, to everyone in R&D, to the men and women who build our racing tires in Akron, Ohio, everyone was "all in." The winning attitude that leads to success isn't a some-of-the-time thing, it's an all-of-the-time thing.

#### **Authentic Teamwork** -

I can't begin to enumerate the number of people who had a hand in it, but everyone was united by the glue of genuine teamwork: pursuit of a shared goal above everything else. There was no protecting turf, saving face or defending self interests and agendas.
Only one thing mattered: providing the right tires for every race.

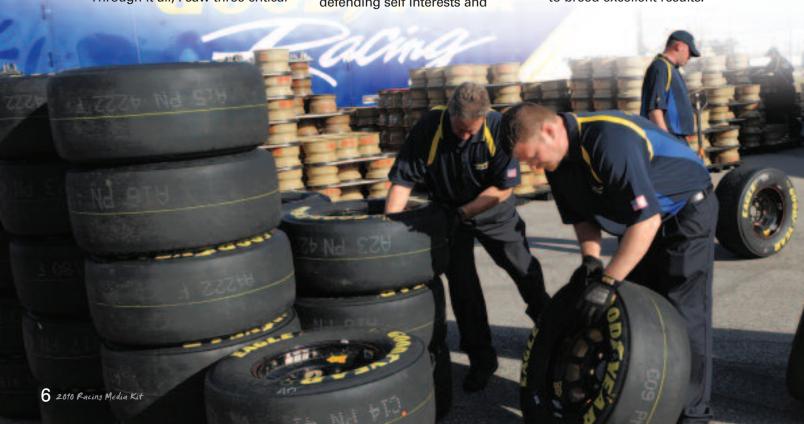
can Tire The more I thought about how these

elements were critical in 2009, the more I realized that they've been there all along.

Goodyear's success – from
Sprint Cup tracks to small ovals
and drag strips – is phenomenal.
I believe it is attributable to our
ability to successfully embrace and
address whatever challenges
come our way. Long after a
weekend's results are forgotten,
this is what will stay with us.
Winning is the outcome, but real
success is in the dedicated, focused
effort. Goodyear's commitment
to doing things right will continue
to breed excellent results.



Rich Kramer, President Goodyear North American Tire



## The Strength of Exclusivity

As Goodyear begins its 58th year as a racing tire supplier to NASCAR, it also commences its 14th season as the exclusive tire for NASCAR's top three series - Sprint Cup, Nationwide and Camping World Trucks.

The tire maker has certainly been deriving value from its relationship for all of those years,

but the greatest advantage comes with exclusivity. And the advantages are not only for Goodyear, but for NASCAR as well.

Kris Kienzl, Goodyear's NASCAR marketing manager, says that the brand reaches NASCAR fans - an enormous potential tire-buying audience - without clutter or confusion. "The fact that we are the only tire in NASCAR means that we are in front of the whole NASCAR audience," said

Kienzl. "About onethird of tire buyers identify themselves as NASCAR fans, so our involvement isn't being shared or diluted by another tire maker. And these fans know cars and know tires."

This brand clarity also is an advantage for Goodyear retailers. "It's easy for our retail-

ers to understand why we're in the sport," said Kienzl. "Our sponsorship is endemic and strengthens the connection between retailers, consumers and the brand."

That connection is most easily supported in Goodyear's retail outlets, where point of purchase material, signage and other tools are available to help dealers take



Kris Kienzl. Goodyear NASCAR **Marketing Manager** 

"The fact that we are the only tire in NASCAR means that we are in front of the whole NASCAR audience... and these fans know cars and know tires." - Kris Kienzl

advantage of NASCAR. At the same time, Goodvear's NASCAR position signifies commitment. "We focus on

one thing that directly contributes to the performance on the track, and we do it well. That means something to the teams and drivers, but we believe it also strengthens the brand's credibility with consumers."

Goodyear's exclusivity is also an advantage for NASCAR. In years when competing tire makers were in the sport, many believed that tire performance became secondary to speed and winning. A sole supplier levels the playing

field in a positive way.

Having one supplier means also that tire development will be smoother as cars, tracks and needs change. NASCAR and Goodyear give each other candid, constant feedback and have only one goal: put the drivers on the best possible tire for each track in each series.

"We are in a number of different forms of racing," added Kienzl, "but when we go into a series, we go in for the right reasons." First, the form of racing has to fit with Goodyear's tire development efforts. Second, the company has to have the right resources and support to be successful in that series. And third, Goodyear looks

for strong growth potential.

"Whether you are talking about NASCAR, NHRA, any other form of racing or consumer tires, marketing is essentially

relationship development," Kienzl said. "Goodyear has very strong brand recognition among NASCAR fans. The key is taking that recognition and turning it into preference when they need to purchase new tires for their vehicles. People tend to think about tires only when they need them every few years, so it's up to us to communicate what our involvement in NASCAR means as it relates to the tires we produce for their vehicles."

Goodyear marketers work through many different channels to develop and implement effective marketing communications and promotions plans. Kienzl works to grow consumers' affinity for the Goodyear brand by ensuring the company's NASCAR sponsorship is maximized in the marketplace. This work involves not only advertising during race broadcasts, but also activities at tracks and with retailers in local markets.

When consumers are in the market for tires, broader themes such as Goodyear's innovation, durable products and commitment to quality are best communicated through the company's primary customer-base - the dealers, or the "people behind the counter."

'By aligning the race tire with the consumer tire technology, we have a better opportunity to communicate our innovations in the marketplace, making them more relevant to consumers," Kienzl said.

## Moving Ahead Goodyear Racing in 2010

The Goodyear Tire & Rubber Company faced many challenges during the 2009 racing season. The tire manufacturer hit them head on, found a great deal of success, and now looks to build off that in 2010.

"Last year was one of the most successful seasons in recent memory for Goodyear Racing," said Stu Grant, Goodyear's general manager of global race tires. "In a sport that is so fast-moving, you either stay ahead or get left



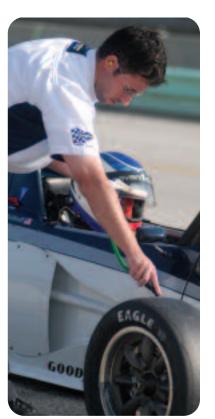
behind. We, in fact, did stay ahead of the curve and set ourselves up for a very bright future in the wide world of motorsports."

Being involved in racing is not like being involved in any other sport because it has so many disciplines. While some might look at that as a problem, Goodyear looks at it as a challenge.

"When we talk about motorsports, we talk about many different forms of racing," Grant said. "In the U.S., the conversation usually starts with NASCAR, but that's just the tip of the iceberg for Goodyear. We are successfully involved in drag racing with both the NHRA and IHRA, we have far-reaching short track and sports car programs, and we have recently stepped up in our dirt racing program.

"More isn't always better, but in our case it is. "Grant said. "Each of the forms of motorsports we're involved in are truly important to Goodyear, both from a competition standpoint and a marketing standpoint. The way our racing program is structured, we cover the country both geographically and from a fan standpoint. That gives us the greatest range of competitive outlets and the greatest number of fans we reach. When fans see us succeed on the track, they consider this when making the decision to buy passenger tires for their vehicles. It's long been known that racing fans are the most loyal consumers and that translates into the number of race fans that buy our tires. And that's just good business."

It's business as usual for Goodyear's NASCAR program, with 2010 marking the 58th season it is involved in America's No. 1





... Racing fans are the most loyal consumers and that translates into the number of race fans that buy our tires.

motorsport, and the 14th consecutive as the exclusive tire supplier to NASCAR's top three series - Sprint Cup, Nationwide and Camping World Truck.

"We are extremely excited for the 2010 NASCAR season," said Grant. "Last year was one of the most challenging our company has ever faced in its racing history, but we really responded like champions. Our engineers and manufacturing people stepped up and answered every challenge. We relied on what has always worked for us, and applied some revolutionary thinking where it was needed. Every member of the Goodyear team should take pride in what we've accomplished."

But as mentioned, Goodyear is involved in much more than just NASCAR. The company's drag racing program continues to speed along, winning the most NHRA national titles among all tire makers (5) along with two IHRA titles in 2009.

"Our D-2550 rear drive tire for the Top Fuel and Funny Car divisions has



proven to be highly successful since we introduced it in '08," said Grant. "Our involvement in drag racing is a big priority for our company. We've had a lot of success over the past several years and that looks to continue in 2010 and well into the future.

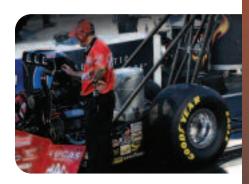
"Another level in our straight line racing program is highlighted by the development of a line of DOT-rated drag tires that we will produce in Akron," Grant added. "The most popular sizes of those tires are released and ready for production, in addition to a line of DOT-rated sports car tires. In the latter discipline, these new tires should set us up for a great year of competition in SCCA, to build off what we've already accomplished in sports cars in the Star Mazda Championship presented by Goodyear."

The roots of the sport have always been important to Goodyear's racing division. The company's new DOT tires will highlight that, as will Goodyear's re-tooled short track program.

"With the recent relocation of our short track tire production to our Medicine Hat, Canada facility, our available manufacturing capacity has been significantly increased," said Grant. "We're working hard to take advantage of that opportunity for additional volume. Not only can we grow our short track asphalt and short track dirt involvement from our Canada plant, but we can expand into new areas with the capacity that's now available in the Akron Innovation Center.

"An example of that is that our new available capacity allowed us to bid on, and secure, the sole rear tire supplier contract for the World of Outlaws Sprint car series, which is something that we are very excited about. We've produced sprint car tires for a long time, but beginning in 2010 we'll be able to expand our program to the World of Outlaws Series, and to a great number of sprint car tracks across the country."

The 2010 dirt racing program will feature not only the exclusive rear tire deal with the World of Outlaws, but also a similar deal with the O'Reilly All Star Circuit of Champions. Equally important is the fact that Goodyear has become the title sponsor for the 2010 Goodyear Knoxville Nationals presented by Lucas Oil, probably the most important dirt track event in the country.



In a time when so many companies and industries are pulling back, Goodyear continues to expand and move forward. But then again, that's what racing is all about... moving ahead all the way to the checkered flag.

## 2010 Venue Groupings

For Goodyear Eagle and Wrangler Racing Radials

NASCAR Sprint Cup Series, Nationwide Series & Camping World Truck Series

**Group 1** Daytona Talladega

Group 2 Charlotte
Chicagoland
Darlington
Homestead
Las Vegas
Texas

Group 3 Atlanta
California (Fontana)
Dover
Kansas
Kentucky
Michigan
Nashville

**Group 4** Bristol Indianapolis Pocono

Group 5 Indianapolis (O'Reilly)
lowa
New Hampshire
Phoenix
Richmond
St. Louis (Gateway)

**Group 6** Martinsville

**Group 7** California (Infineon) Elkhart Lake

Road Montreal Course Watkins Glen



From up here,

we see how saving gas

with Goodyear Fuel Max® tires

helps make everyone a winner.



A unique treed compound requires less energy to move so your car can use less gas.



A great fuel strategy helps NASCAR\* drivers win races. Having Goodyear Fuel Max\* tires can make you a winner at the pump. Fuel Max tires can help you save 2,600 miles of gas over the life of the tires, so you can *Get there*\* with less gas!\*

To learn more about the new Goodyear Fuel Max, race on over to goodyeartires.com.



NASCAN" is a registered trademark of the National Association for Stock Car Auto Racing, inc. "2,600 miles based on a 4% fuel economy improvement, on 65,000 Mile Tread Life Limited Warranty, comparing the new Goodyear Assurance" Fuel Max" tire to the previous Goodyear Assurance" tire tested on P195/65R15 size – 2008 Honda Civic, and comparing the new Viva Authority "Fuel Max" tire to the Goodyear Viva" Touring tire tested on P215/60R16 size – 2009 Toyota Corolla. Actual results may vary based on when thes are replaced, driving and road conditions, and proper tire maintenance.

## Factory Pride

GOODFYEAR

In most of Goodyear's tire manufacturing facilities, a wide range of tires are built for many applications. Passenger tires for commuter touring or high performance use, light truck and SUV tires, commercial truck tires, even off-the-road and aviation tires are just some of the products that are manufactured and distributed across North America.

## Each tire is custom-built and made by hand.

But there's a different vibe at the Innovation Center Manufacturing (ICM) plant in Akron. That's because the 375 Goodyear associates there focus on building one thing: racing tires. Every Goodyear racing tire used in NASCAR's top three series – or in NHRA, World of Outlaws or most other circuits – are built in this one location.

There's a sense of pride, a sense of excitement, among all the people here," said Rich Harold, plant manager, ICM. He points out that the associates who build Goodyear's NASCAR tires are in the unique position of actually being able to watch them in use every weekend. And they take the tire performance personally.

"The first thing Monday morning, we look at the race report. After a tough race, people will ask questions such as 'Was there something we could have done? For us," Harold laughs, "we like an uneventful race. But we all take a lot of pride in the tires and the outcome of the races."

It's not uncommon for a few of NASCAR's Sprint Cup drivers to tour the Akron plant each year. And when they do, says Harold, they are amazed at the amount of work, the amount of detail and the amount of care that goes into making each tire. Each tire is custom-built and made by hand.

Actually, they are made by many hands. There are five major stages of building a tire for NASCAR competition. First is mixing.

Natural rubber, synthetic rubber, oils and other compounds are mixed in a Banbury (a kind of giant blender) to get the right rubber specification. At this stage, it's easy to notice that NASCAR rubber is much tackier than the rubber you'd find in a passenger tire.

The next stage is component prep, in which the individual pieces of the tire – tread, sidewalls, beads, fabric belts, etc. – come together in preparation for the next stage, tire assembly. At this point, a tire builder takes all the components and puts them together, building what

is called a "green" or uncured tire. From there, the tire goes into a curing press and is essentially cooked with high pressure steam heat to mold it into the final shape and lock all the components together.

After it comes out of the curing press, it is ready for the last process, final finish. This is where all the internal and external inspections take place, including the crowning touch – the application of the Goodyear Eagle word-marks to the sidewall.

For each NASCAR weekend, Goodyear will build anywhere from 3,000 to 6,000 tires for use in the top three series. Tires for any given race must be built and stocked 30 days prior to the race date. On top of that considerable assignment, Goodyear builds tires for NHRA, World of Outlaws, sports cars, dirt racing, DOT-rated series and more.

From start to finish, each NASCAR tire passes through the hands of up to 25 skilled professionals. After a tire passes build inspection, a bar-coded label and identification label is inserted, indicating the name of the tire builder who assembled all components and brought the tire to life.

Additionally, the name of the tire builder can be traced back through the encoded RFID tag, which is embedded in the sidewall of each tire.

"There is a lot of pride at stake when it comes to putting your name inside a NASCAR tire," said Harold. "From time to time, we have a race engineer at the track scan the RFID chip in the tires of the race winner's car. Then at an internal meeting we'll announce who built the tires for the Daytona 500 winner,

From start to finish, each NASCAR tire passes through the hands of up to 25 skilled professionals.

for example. So that's kind of like our own victory lane."

Which is appropriate at ICM, where the entire focus is unmistakably on racing. "From the time you walk in through the employee entrance and see the giant race car decals, to our own 'victory lane' setup on the floor, you know we're all about racing," said Harold. "Many of the tire building machines have photos of drivers or cars or other things related to racing. The majority of the people who work here are real fans, whether it's of NASCAR, NHRA or some other series."



In today's NASCAR world, with team testing being extremely limited, Goodyear tire tests have taken on increased importance. In addition to actual race weekends. the data acquired at these tests is crucial in helping Goodyear design and build the best, safest

> race tires possible.

In order to maximize the information gathered, Goodyear engineers work closely with NASCAR teams, not only at the test, but during the time leading

Goodvear has two levels of instrumented data collected during tire tests. The first is the standard data

up to it.

channel that is requested from each team for relevant runs at every tire test, while the second involves instrumenting a car with Goodyear sensors at select Goodyear tire tests.

#### **Standard Data Acquisition Request:**

In late 2008, Goodyear began requesting specific data channels from all teams participating in Goodvear tire tests. Prior to each test, a Goodyear engineer contacts a representative of each team attending to verify that the vehicles are properly instrumented, as well as to determine the best way to transfer the data. This information is used to give the engineers additional objective data to support the other data being collected to determine the best race recommendation.

#### **Goodyear Special Instrumentation Processes:**

When the need arises, Goodyear enlists the help of NASCAR teams to install instrumentation on their vehicles with Goodyear sensors.

The primary function of the Goodyear sensors is to develop a track-driven durability test that fully captures the operating conditions of the tire during a lap of an actual race. In addition to being downloaded to lab test machines, this data is utilized to drive and validate modeling and performance lab testing. To achieve this, Goodvear collects data from wheel force transducers (measuring the forces and moments acting on the tire, as well as the RPM; "forces" are the pushing that the ground does on the tire; "moments" are the bending the ground does to the tire), slip angle sensors (the angular difference between the direction the tire is pointing and the direction the car is heading) and camber angle sensor arrays (the angle between the vertical wheel axis and the vertical vehicle axis when viewed from the front or rear).

This process begins with Goodyear engineers contacting a team several weeks prior to the



## GOOD TYEAR

test to determine when the car will be available to install the sensors. The engineer then travels from Akron, Ohio to the team's shop and brings the equipment for the set-up. The Goodyear wheel force transducers require the teams to fabricate and attach an anti-rotate

# The data collected... is used to develop a mathematical model for each tire used for a race.

bracket to hold the stator stationary. This is slightly different for each team due to suspension geometry and requires the most time for the set-up.

When all sensors have been installed and all the necessary wires have been run, the system is checked to verify that all the sensors



tested, and the instrumentation being utilized, various tire combinations or vehicle set-ups may be evaluated. Engineers work with the team to set up and verify the functionality of the sensors throughout the test.

Once the data is collected at the track, Goodyear engineers use it in several ways. First, it is used to develop lab test drive files for durability, wear, etc. These tests are run on actual tires to screen production builds destined for races as well as

testing at the Calspan Tire Research Facility lab in Upstate New York. The data collected at Calspan is used to

develop a mathematical model for each tire used for a race. The models are then used in computer simulation software to represent how the tire will react in response to specific inputs from other vehicle components. The model needs various inputs such as normal force, camber, slip angle and pressure to calculate the resulting forces and moments. These forces and moments can subsequently be validated by comparing them to the data collected at the track.



are functioning properly and being recorded. This entire process generally takes two days. With the car fully instrumented and checked, the car is ready to capture all forces and moments, slip angles and velocities at all four wheel positions, as well as the camber angle for the front tire positions.

When the work at the shop is done, it's time to go to the track. Depending on which track is being

to determine the effect of design changes of development tires. Second, the data is also used to determine conditions for Finite Element Analysis mathematical computer models and to validate the results. The results of these models can then be validated by the track data.

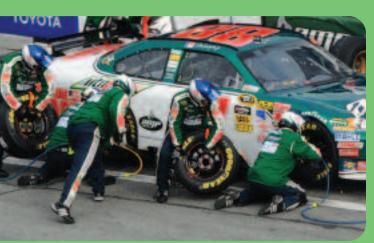
In a similar manner, the data is used to determine test conditions for force and moment performance

So when Goodyear's thousands of tires show up at the race track each weekend, there's a lot more that went into the process than just loading them on and off a trailer. The work starts that weekend at the race, continues back at Goodyear's Innovation Center back in Akron, back to the teams' race shops and then back to the track again. And so on, and so on...

## Goodyear is "High in Fiber"

## hancing Toughness through Innovation

When one hears the word "Kevlar®" the first uses that come to mind are protection for police officers and military personnel, or aerospace components. However, with the hard work of the engineers at The Goodyear Tire & Rubber Company, this space-age product has also been used in NASCAR race tires.



What is Kevlar? Kevlar is an aramid fiber that is five times stronger than steel at the same weight. According to Dupont, Kevlar's maker, it maintains its strength and resilience in a wide variety of temperatures and in many demanding applications.

That's what makes it a perfect fit for the fast-paced, high-powered world of NASCAR. Think of the parameters Goodyear needs to work within to build race tires for the Sprint Cup Series – a 3,400-pound car with a 900-horsepower motor, driven on tracks ranging from a half-mile to 2.66-miles long and banked anywhere from six to 36 degrees.

How are aramid fibers used by Goodyear, and what does that do for its race tires? Simply put, the aramid fiber is used in the lower

sidewall of the Goodyear Racing Eagles run on some of the more demanding tracks on the circuit. Going back to the product description, aramid is stronger than steel, so less is needed to add the same amount of strength. It helps to strengthen the tire's sidewall, thus stabilizing the footprint of the tire that meets

> with the track. A bigger footprint translates into enhanced grip and better, more stable cornering. And that means better racing. Like all forwardthinking companies involved in racing, Goodyear strives to transfer the technology from the track to the street. The company is now using aramid fibers in some of its passenger tires. The aramid yarns are developed into cords

to help meet Goodyear's passenger and light truck tire performance needs including ride and comfort, handling, and a reduction in tire weight and road noise.

And what is true on the track is often true on the street. For example, as a passenger vehicle travels through a corner, an increased amount of force is transferred to the outboard shoulder of the tire, increasing the contact area and grip. In comparison, less force is exerted on the inside shoulder of the tire, resulting in reduced contact area and reduced grip. By dispersing load distribution across the

tread contact patch in

Sharing technologies between its racing and passenger tire divisions, Goodyear brings the best of both worlds to its tires.

cornering, the contact patch experiences less load transfer change, resulting in a more uniformly shaped contact patch, so drivers can experience enhanced levels of control from their ultra high-performance vehicles.

Most notably, Goodyear's Eagle F1 Asymmetric tire uses aramid to raise the bar on ultra high-performance handling and response. Its unique Active CornerGrip Technology, provides enhanced reinforcement, compressing the tread contact patch more evenly against the road for enhanced grip while cornering.

Sharing technologies between its racing and passenger tire divisions, Goodyear brings the best of both worlds to its tires. Highlighted by using such groundbreaking materials as Kevlar in its tires, Goodyear continues to strive to bring innovative technology to all its customers, whether they are on the track or local streets.



## Race Tire Sticker Data



Every new Goodyear race tire is delivered with a tire label.



#### **Eight-Digit Barcode Identifier**

**Spring Rate Number** 

tire diameter, tread width and bead diameter

#### **Product Code**

**Tire Classification** 

#### Tire D Code

identifies mold, construction and compound combination; also found on tire sidewall

#### **Sequence Number**

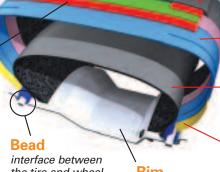
identifies tire production sequence

Other markings on the race tire (not shown) include: F, H or X indicating type of final quality inspection. Two colored dots indicate the optimal match mounting position for the tire and wheel.



#### **Belt Package**

helps control footprint shape at high speeds



the tire and wheel

#### Tread Compound

provides grip to the race track

#### **Carcass Plies**

helps provide load carrying capability

#### **Inner Liner**

serves as an inner tire to help support the race car if the outer tire is punctured

controls sidewall stiffness

built to help accommodate inner and outer tires

## Passenger Tire Cutaway

# **Belt Package**

helps control footprint shape and generate cornering power

#### **Bead**

interface between the tire and wheel

#### **Tread Compound**

aids traction and wear in varying driving conditions

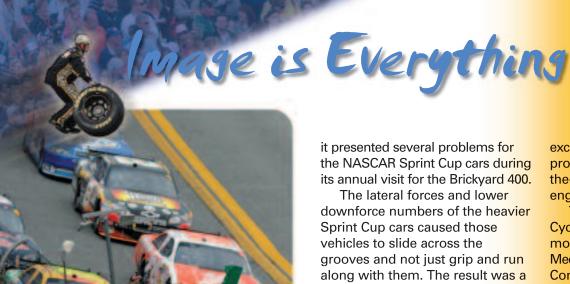
#### **Tread Pattern**

helps provide traction capabilities

#### **Carcass Plies**

help provide resilience and load carrying capability

in some tires, a sidewall insert to enhance steering response during cornering



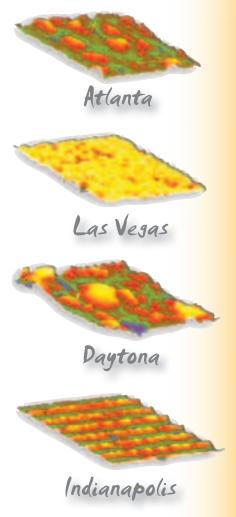
One of the more unique aspects of Goodyear Racing's tire testing program over the past couple years has been in the track imaging area. The thought is, if you fully understand a track surface, and then study how a race tire interacts with that surface both physically and chemically, it will help you build a tire to best work on that particular track.

That may sound like a relatively simple undertaking, but the trick was mastering those three steps through thousands of man-hours of hard work and dedication.

This part of the tire designing process came into full view when Goodyear decided to commit all necessary resources to come up with a tire that would work with the extremely aggressive track surface at Indianapolis Motor Speedway. That track's surface had grooves diamond-ground into it several years ago to make the grip level over its two-and-a-half-mile oval consistent. While that process easily helped the open-wheel cars that run at the Speedway each May,

it presented several problems for the NASCAR Sprint Cup cars during its annual visit for the Brickvard 400.

downforce numbers of the heavier grooves and not just grip and run along with them. The result was a grating effect on the tires, causing



The four graphics above are known as three-dimensional track surface contour plots. They illustrate the range of track surface contours from the smoother Las Vegas surface. to the more abrasive Atlanta and Daytona surfaces, and the abrasive grooved Indianapolis surface.

excessive wear. That unconventional problem necessitated some out-ofthe-box thinking by Goodyear's engineers and scientists.

That's where Goodyear's Life Cycles Mechanics Group - and more specifically the Contact Mechanics sub-group - got involved. Contact Mechanics is a group of engineers specializing in the study of the physical interaction between tires and road surfaces, or the track surface in this particular case. Basically, the sub-group would study Indianapolis Motor Speedway and how the tire was affected, which tire parts were affected and even how the track surface was affected.

Again, pretty simple concepts, though ones that required some advanced thinking, effort and machinery. In all, Goodyear's Contact Mechanics group travelled to Indianapolis 10 times between the 2008 and 2009 Brickyard races in an effort to help find a solution to the unique challenge of the track's grooved surface.

The sub-group made a couple of visits shortly after the 2008 Brickyard race, armed with a sensitive laser system designed by Goodyear engineers to measure the track surface from a topological point of view. The first trip was an eight-hour session during track business hours, complete with buses rolling by, taking tours of the Speedway grounds. Contact Mechanics' laser took measurements on a selected line across the entire width of the track. The laser dot has a diameter equal to the width of two human hairs, equaling 5,000 points every inch. In total, the 41+ feet measured vielded 2.5 million data points.

Contact Mechanics went back to the track to repeat the process six weeks later. While these two

The thought is, if you fully understand a track surface, and then study how a race tire interacts with that surface both physically and chemically, it will help you build a tire to best work on that particular track.

trips were essential in determining the accuracy and precision required to fully understand the complex track surface at Indianapolis, the engineers ultimately realized that while they could measure the track

surface with this laser, it would not allow them to measure any changes to the track. They determined that they needed a newer, more accurate measurement technology to further understand the tire/track interaction

for Sprint Cup cars at Indianapolis.

Contact Mechanics ultimately did so using two specific machines - the Dynamic Friction Tester and the GFM MikroCAD 3D camera. The Dynamic Friction Tester is basically a mechanical rotating disk with race compound rubber samples attached and with load cells that measure forces experienced when the disk is physically dropped onto the surface while turning at a high speed. Data collection is halted once the disk has completely stopped rotating, while a mathematical program records the signals collected from the load cells and sensors and converts them into an average coefficient of friction.

The GFM machine is an optical device that collects surface images in three dimensions using **Dynamic Light Processing** technology and a powerful still image camera to capture surface

characteristics on a micro scale. The resolution of this device is a miniscule three microns, or approximately one-thirtieth the thickness of a human hair. Basically a light is projected onto the surface at a known angle. The computer then creates simple light patterns while the camera takes pictures each time the pattern changes. The software gathers each image, analyzes it and produces a scaled image using color graphics.

The raw data is saved and later

analyzed using other software designed to calculate a vast amount of surface parameters.

**Throughout** its 10 trips to Indianapolis, the engineers in

**Goodyear's Contact Mechanics** group used these machines, as well as their massive brain power, to measure, test and analyze the track surface. After consulting all along the way, in the end they presented their final data and opinions to Goodyear race engineers, who went on to design a winning tire for one of NASCAR's most high profile races.

Much was made of Goodyear's multiple tire tests featuring Sprint Cup cars at Indianapolis Motor Speedway, all in an effort to come up with the right tire combination for the 2009 Brickyard 400. While the 30+ Sprint Cup teams that participated in those sessions played a high profile role in helping create that success story, it was an almost invisible group of engineers in Goodyear's Contact Mechanics group that did much of the work that the general public didn't see, but proved to be equally important.

## An Icon in the Sky

Now in their 85th year of flight, Goodyear's world-famous airships have adorned the skies as very visible symbols of The Goodyear Tire & Rubber Co. Today, these graceful giants travel more than 100,000 miles across the United States per year as Goodyear's "Aerial Ambassadors." Among the blimp's assignments are NASCAR and NHRA events throughout the season.

The blimp tradition began in 1925 when Goodyear built its first heliumfilled public relations airship, the Pilgrim. The tire company painted its name on the side and began barnstorming the United States. Over the years, Goodyear built more than 300 airships, more than any other company in the world.

Today, Goodyear operates three blimps in North America: the Spirit of Goodyear, based in Akron, Ohio; the Spirit of America, based in Carson, California; and the Spirit of Innovation, in Pompano Beach, Florida. The blimps can often be seen hovering over racing events, providing gorgeous aerial shots for television coverage.

Flying at an altitude of approximately 1,500 feet above the racetrack, the Goodyear blimp carries a pilot, camera operator and camera equipment on race day. The highdefinition camera is mounted on an aluminum track and can be raised or lowered from the gondola. The camera features a gyro-stabilized lens that allows for smooth and steady pictures with 360-degree coverage. The signal is transmitted via microwave antenna from the airship to the on-site television production mobile units.

For more information and photos of the Goodyear blimp, visit www.goodyearblimp.com.

## Goodyear Continues Energetic Develop

## For Drag Racers, Land Speed Merchants

Goodyear's position as the leading tiremaker in drag racing is unquestioned. The quickest, fastest and most powerful earth-bound machines in the world look to Goodyear for tires that generate enough traction to take advantage of their stunning ability to go fast in a straight line.

And the product development never stops. Several new lines of drag racing and land speed tires that were introduced in 2009 will see continued additions in 2010. It's a cycle that has not changed as long as Goodyear has participated in motorsports and is a cycle of excellence as apparent in drag racing as it is anywhere.

The Winged Foot group

grabbed five National Hot Rod Association Full Throttle Drag Racing Series and Lucas Oil Drag Racing Series championships in 2009, more than all other tiremakers combined. Add to that two championships in the International Hot Rod Association professional ranks, and you get the idea that Goodyear produces tires with a wider range of performance applications than any competitor.

"It's a dynamic marketplace and a dynamic sport," said Greg Stucker, Goodyear's director of race tire sales. "We have to keep our development program at the same energetic pace as the teams do with their cars. By the same token, we have to work

with the teams and continue to give them the best trackside technical support in the business. That's what racers expect from Goodyear."

One of drag racing's signature events, the NHRA's Winternationals at the Auto Club Raceway at Pomona in California, celebrates its 50th running in 2010. Goodyear has enjoyed remarkable success there through the years, starting with the first Winged Foot Winternationals wins in 1966. The development effort began years before those first Winter-



"...we have to work with the teams and continue to give them the best trackside technical support in the business." - Greg Stucker



nationals victories and continues now. Even in the NHRA's Top Fuel category, where Goodyear is the exclusive tire provider, the company stays in front of the developmental charge. Goodyear will introduce a new front runner for Top Fuel cars in 2010 as well as front runners for other categories.

Goodyear's Sportsman customers have come to rely on the advances made to cope with the rigorous demands placed on tires by the cars in the technologyladen professional categories.

"Anything we generate for the pro categories, be it a new building process, a new material or even a new testing procedure, quickly finds its way to our sportsman program," said Carolyn Ashbee, Goodyear's sales account manager

## ment Pace





for drag racing. "The information flows from work benches to desks to computers and then to the track because, at Goodyear, we are always looking for the next advancement."

No drag racer knows that better than Tim Tindle, the Florida-based racer who spends most of his race days behind the wheel of his Pro Mod car. But, racing in a bracket racing dragster during the Thanksgiving Wally Nationals at Emerald Coast Dragway, he recorded a rare perfect pass. Tindle posted a perfect reaction time, .000 seconds, then finished the quarter mile by hitting his 4.89-second dial in with a pass of exactly 4.890 seconds.

"Goodyear is just the only way to go," Tindle said. "I don't think there is another tire out there that can compare to the consistency of this tire when it comes to cold or hot race tracks."



Tindle made the perfect pass on a set of Goodyear D2532 bias-ply slicks.

The D2622 rear drive tire, which is built for the NHRA's Top Alcohol and Pro Mod classes and was introduced in 2009, is built with the same manufacturing process as Goodyear's Top Fuel tires. The D2622 replaces the highly

successful D1022 and retains much of the same materials. The D2622 measures 34.5 inches tall, 17 inches across the treadface and mounts on a 16-inch wheel.

The 2009 drag racing season saw Goodyear introduce entire lines of radial tires and those tires have been successful. The 2010 season will witness more of the same.

Goodyear's Eagle SS line of DOT approved radials started the 2010 season with nine sizes for 15, 16 and 17-inch tires. Those tires range in size from the D4300 (P235/60R15) to the D4304 (P315/35R17).

The development work continues on the Eagle SS line and Goodyear expects to release more radials in 18-, 19- and 20-inch sizes in 2010.

Goodyear's forward-looking drag radial program reaches beyond the Eagle SS line. Where the Eagle SS line has grooves in the treadface, as required for the DOT designation, the Eagle Drag Radial line is for racing slicks. Here, too, the 2010 season will see new product introduction to go with the tires that went into use during the previous season.

The tires in this line all mount on 15-inch wheels but Goodyear offered six sizes, ranging from 30 to 33 inches tall.

Goodyear's D4205, which was introduced in 2009, is popular in the NHRA's Stock Eliminator class. The tire measures 30 inches tall, nine inches across the tread and mounts on a 15-inch wheel. The construction includes a 92.3-inch rollout. The D4201 has the same compound and size, with a 93.5-inch rollout. Another part of the line, the D4209, sizes up at 31 inches tall, 13.5 inches wide, goes on the same wheel size and rolls out at 99.5 inches.

The popular line will be augmented in 2010 with a 32-inch by 14-inch offering with a 101-inch rollout for 15-inch wheels and another tire that will measure 33 inches by 17 and also mounts on a 15-inch wheel.

"The radial sportsman development program has been in full swing here in Akron," Ashbee said. "It's a commitment we've made and we've had a lot of success. We have new products coming out in a lot of areas."

"I don't think there is another tire out there that can compare to the consistency of this tire when it comes to cold or hot race tracks."

### - Tim Tindle

Seven more tires for 15-inch wheels were introduced in 2009 for applications ranging from nine-inch to 12-inch tread widths.

Goodyear's land speed racer program is the measuring stick against which all other tire programs are compared. Few other tiremakers are even involved in the sport.

Goodyear's development program is working on tires that will be certified for 450-mile an hour runs at places like the Bonneville Salt Flats.

"Goodyear has an unrivaled heritage in land speed racing," Ashbee said. "Most of the significant achievements in that form of the sport that have been accomplished by cars using rubber tires have been accomplished on Goodyear tires. We've stayed in this sport when other tiremakers have left and we have kept moving forward."



The Wrinkle Shot: What's Really Going On Down There?

as storing energy in a spring," said Auffenberg. "As the car starts to move, the tire grips and the sidewall wrinkles. It is storing potential energy. As the tire unwinds, you are taking the stored potential energy that you get from the tire winding up and turning it into kinetic energy as the car moves and that springs the car forward."

Simple, huh? Not so fast; there is more to it. Putting the optimum air pressure in the tire is critical to getting the proper use out of all that energy.

"The proper inflation pressure is needed to get the right amount of wind up," Auffenberg explained. "If the pressure is too low, it changes the dynamic footprint and that can lead to tire shake and then too much spin. If the inflation pressure is too high, the tread face can't get the maximum grip on the track surface."

In other words, the science of tire construction has advanced to the point where that photographworthy moment at the hit of the throttle is part of a plan designed to get the car moving quickly.

"The focus on the carcass construction and tread compound is to generate movement straight ahead," Auffenberg said. "You don't have to deal with lateral forces, as you do in, say, sports car racing or with stock cars. In drag racing, it's all about tangential acceleration."

Generally speaking, photographs of the sidewall becoming wrinkled during the launch of a drag racer depict bias-ply tires. For example, the National Hot Rod Association's

top three professional categories, Top Fuel, Funny Car and Pro Stock, all race on Goodyear bias-ply tires. Auffenberg said radial tires work in another way.

"It's different with a radial drag tire," he said. "With the belt packaging you have a more consistent dynamic footprint. The dynamic footprint and tread compound play a bigger role in the launch with a radial."

Radials wrinkle, just not as much as a bias-ply tire. But, bias-ply or radial, Auffenberg said his job and that of all Goodyear engineers is still the same.

"It's a matter of working with the customer, whether they're a professional or a sportsman," he said. "It's working with the team

to optimize the air pressure in the tires and working to see that they have the proper tire for the application. There are a lot of forces at work and we need to help the teams get the most out of the total force that is available."

In the science of wrinkles, Goodyear leads the way.

Photographers call it, 'The Wrinkle Shot' and it has been a staple among drag racing images for decades. You've seen one, a photograph of a drag tire's sidewall crinkling during the first few instants of a pass down a drag strip.

And the wild part is that all this is supposed to happen. It happens on every run. Every time a drag racer hits the throttle, the sidewall wrinkles. The teams know about it, the fans know and, obviously, the photographers are aware.

Believe it or not, says Goodyear's Dave Auffenberg, what's happening in those first few fractions of a second of a run when the sidewall looks so different is the storage of energy.

Auffenberg is Goodyear's project leader for tire development in drag racing, sports cars and dirt racing. He has a chemical engineering degree from Purdue University and he is a master of the science involved.

"The whole wrinkle wall concept of drag tires is the same





Goodyear grabbed the attention of the dirt track racing world when various sprint car sanctioning bodies and tracks around the country announced they would partner with the company in 2010. The announcements, especially that Goodyear would sponsor 2010 Goodyear Knoxville Nationals presented by Lucas Oil, continued the tiremaker's long tradition of dirt track success.

The growth in Goodyear's dirt track program does not end with sprint cars. Goodyear will be the exclusive tire supplier for the National Dirt Racing Association, beginning in 2010 as well.

"We have a unique opportunity to give the sanctioning bodies and weekly tracks tires the characteristics they Want." - Justin Fantozzi

"Through the years, our sprint car program has been an important part of what we do," said Greg Stucker, Goodyear's director of race tire sales. "Obviously, our sponsorship of the 50th Annual

Goodyear Knoxville Nationals presented by Lucas Oil offers us a unique marketing opportunity and we are looking forward to taking advantage of that high profile position. And as we are marketing our Goodyear brand of products, we'll be helping the sport of sprint car racing."

Starting in 2010, Goodyear will supply the rear tires for Knoxville's weekly 410-sprint car program; other tracks have followed Knoxville's lead.

"When race fans choose to buy tires for their family or work vehicles," said Justin Fantozzi, Goodyear's marketing manager, "we want them to remember the big yellow letters they saw on the racing tires."



Also this year, Goodyear will be the exclusive supplier of the rear tires for the World of Outlaws Sprint Car Series and for the O'Reilly All Star Circuit of Champions, two of the premiere winged sprint car racing series

Goodyear will be the exclusive tire supplier for the National Dirt Racing Association, beginning in 2010 as well.

in the country. Goodyear will supply front tires, too, but the front positions are open to competition among tiremakers.

In addition, tracks around the globe are turning to Goodyear to supply tires for their sprint car programs.

"We've done a lot of work to put our dirt program in this position," said Fantozzi. "We have a unique opportunity to give the sanctioning bodies and weekly tracks tires the characteristics they want."

The touring series programs will have a variety of tire applications for use to help tune their chassis. The right rear tire will have a 105-inch rollout, measure

17 inches across the tread face and mount on a 15-inch wheel. There will be four tread compound choices on the right side.

The left rear tires will have three rollout sizes. 93, 95 and 97 inches. They will measure 15 inches across the tread and mount on a 15-inch wheel. The left side tires have two compound choices.

"This tire package allows for more maneuverability in racing traffic," Fantozzi said. "That's something sanctioning bodies and individual tracks put very high on their wish list, so that's what we have built into our tires."

Goodyear's tire package for late model dirt car racing has been very popular with sanctioning bodies and competitors alike.

continues to be an area of terrific growth potential."

Scott Junod, Goodyear's sales manager for short track racing, said the 2010 program is a continuation of Goodyear's long history of working with racers, track operators and sanctioning bodies to provide the best and most cost effective way to go racing.

GOOD FYEA

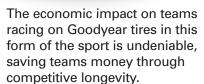
"Goodyear strives to build the best tire for each application," Junod said. "There is no doubt that we have the best tire line for the crate late model programs around the country."

And there's more. Goodyear's development program has produced a tire that will work for open wheel modified cars, which are governed by various sanctioning bodies around the United States.

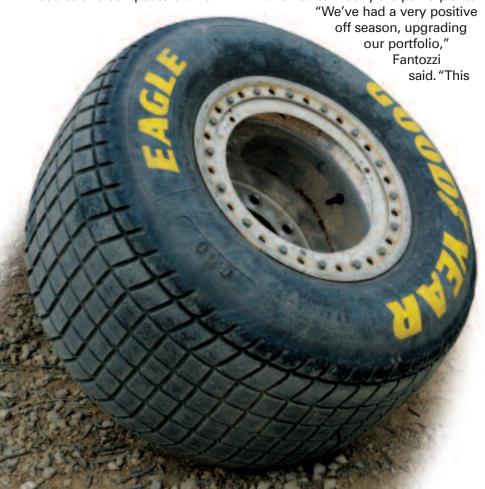
"There is no doubt that We have the best tire line for the crate late model programs around the country." - Scott Junod

"Our modified program is going to continue to grow," said Junod. "It seems like every dirt track in America has a class for these cars and there are several touring programs as well. The tire we built for the modifieds also works for street stock-type cars and other heavy dirt track cars. This is the kind of program that will put all of Goodyear's knowledge and experience into the hands of Saturday night racers all over the country."

Tracks and sanctioning bodies across the continent are looking to Goodyear and taking advantage of the company's position as a leader in global tire technology.



The NDRA sanctions a touring series and weekly late model programs for limited late model cars or cars powered by so-called 'crate' engines. Crate engines are designed for a specific horsepower output and competitors are not allowed to modify the powerplants.





# Goodyear Sponsors 50th Running of Knoxville Nationals

Goodyear will sponsor winged sprint car racing's biggest event, the Knoxville Nationals, beginning in 2010 and for the next three years and the stage could not have a brighter spotlight.

The 50th running of the Goodyear Knoxville Nationals presented by Lucas Oil, the Golden Anniversary of the midwestern classic, will be held in



2010. The event routinely attracts 100,000 fans, offering a unique marketing opportunity. In addition, Goodyear will serve as the exclusive rear tire supplier for Knoxville's 410 sprint car class all season long.

"We see Goodyear marking a new era in the sport for both Knoxville and open wheel dirt track racing," said Knoxville Race Director Ralph Capitani. "Their foresight and ingenuity will help teams focus on the importance of building the fan base for sprint car racing while keeping the costs reasonable."

Other dirt tracks noted the Goodyear-Knoxville agreement and have inked similar contracts, making Goodyear the rear tire supplier for weekly sprint car programs around the country.

"Few events are as important to a sport as the Knoxville Nationals are to sprint car racing," said Greg Stucker, Goodyear's director of race tire sales. "We're pleased to have the Goodyear name associated with this event and to supply our tires to the competitors at Knoxville Raceway all season long."

The Goodyear Knoxville Nationals traditionally draws an entry of more than 100 cars, some of them from as far away as New Zealand and Australia. The event is spread out over four nights of racing and pays for the effort with a rich purse.

It's an event Goodyear is familiar with, having competed in it every year for the last quarter-century.

"Because we've been a part of this for so long, all of us at Goodyear Racing understand and value the history and tradition of that race," said Justin Fantozzi, Goodyear's marketing manager for dirt racing. "We intend to do our part to make the Golden Anniversary a special event."

"We're pleased to have the Goodyear name associated with this event and to supply our tires to the competitors at Knoxville Raceway all season long."

## - Greg Stucker

Only Goodyear can bring marketing's most recognizable symbol, the iconic Goodyear blimp, to a sporting event and the blimp is expected to fly over lowa's rich farmland and race-friendly communities during the Knoxville Nationals.

The 50th Goodyear Knoxville Nationals will be held at Knoxville Raceway Aug. 11-14.

## Goodyear Expands Tire Lineup for Weekend Warriors



Racing's "Weekend Warriors," the weekly short track heroes who pour their hearts and souls into hustling their racecars around short tracks the world over, have a friend in Goodyear Racing. The tiremaker's commitment to manufacturing the right tires for short

Goodyear is developing a new tire that will mount on a 14-inch wheel and will serve the entry-level classes at many dirt and pavement tracks. The new tire will be grooved and will work for a wide variety of applications.

"This is going to be an excellent

addition to our line of racing tires," said Scott Junod, Goodyear's sales account manager for short track racing. "Now, even the entry level drivers can benefit from Goodyear's racing experience and manufacturing heritage."

Also in development for 2010 is Goodyear's D2637 tire for limited late model pavement racers. The D2637 measures 27 inches tall and 7.5 inches across the

treadface. It mounts on a 15-inch wheel. Most paved tracks in the United States have a limited late model program and those classes will benefit from the new piece.

Junod said that Tom Curley, the popular race promoter in the northeastern United States and eastern Canada, has worked tirelessly with Goodyear to help develop the D2637.

"Tom saw the need for this tire," Junod said. "We've been able to develop this product with Tom's help."

Goodyear will continue as the exclusive tire supplier for the American Canadian Tour (ACT) and its Canadian sister series, the Serie ACT Castrol in 2010. So, in addition to the touring programs, the late-model programs on paved tracks in the northeastern United States and eastern Canada that use

the ACT rulebook will also race on Goodyear Eagle bias-ply tires.

The same is true for one of the most popular short track stock car touring series in the southeastern US, the United Auto Racing Association Southern Touring Asphalt Racing Series (UARA-STARS).

Recently, the UARA-STARS program has been attractive for young drivers in NASCAR development programs, but it has long been a destination series for weekly track racers who want an opportunity to race in a touring program.

Goodyear remains the exclusive tire supplier for the upper tier of NASCAR's development circuits, the K&N Pro Series East and West, the NASCAR Canadian Tire Series and the NASCAR Mexico Series.

"Those four programs all race on Goodyear Eagle bias-ply tires," noted Chad Fletcher, Goodyear's sales account manager for NASCAR's touring series. "The two K&N Pro Series programs and the Canadian Tire Series all race on the same line of tires, which means the teams can go back and forth between the series and know what tires they'll be racing on. All four of those series schedule races on a wide variety of tracks, so we have to supply them with the proper tire for each event."

Goodyear's reputation for building the world's best short track tires is evident in Great Britain and the European continent, where Goodyear has become the exclusive tire provider for the British F1 Stock Car Series. Similar programs on the continent use the same rulebook.

These incredible cars resemble American winged sprint cars. They are hustled around cinder tracks on tires made by the leader in race tire innovation, Goodyear.



track applications has never been more obvious than it will be in 2010.

"Goodyear is best-known for its work with the high-profile, professional series such as NASCAR's Sprint Cup Series and the NHRA's Full Throttle Drag Racing Series, but our company sells just as many tires to the so-called Weekend Warriors as we do to the professionals," said Greg Stucker, Goodyear's director, race tire sales. "There are more sportsmen racers out there than there are professionals and the needs of the sportsmen are every bit as important to us as those of the pros. We devote a great deal of our effort toward the sportsmen racers."

Goodyear Racing's effort to supply the best tires to the world's short track racers is apparent when you look at the new additions to Goodyear's short track line for 2010.

There's no question that Goodyear has a reputation for making the most technically enhanced passenger tires

in the world. Many of the advances that helped build that reputation were made on the world's road racing tracks. Those breakthroughs continue to this day and so does Goodyear's commitment to sports car racing as a racing and marketing platform.





virtually every road racing application.

"Sports car racing is a big part of Goodyear's racing heritage," said Greg Stucker, Goodyear's director of race tire sales. "You just can't sit still in this business and we haven't. Our development program produced several new products during the 2009 season and there are more to come in 2010."

Goodyear's Eagle RS line of DOT radial tires has compounds for different purposes. One compound will be used in classic road racing applications, such as the DOT radial-only classes in Sports Car Club of America club racing. Another compound will be offered to Autocross or Solo racers who compete alone on the track against the clock.

One compound, which was introduced in 2009, will bring Goodyear back to competition in groups such as the SCCA's Showroom, Touring and Sedan classes.

Through the years, Goodyear has been a consistent winner in

the SCCA's showcase event, the National Championship Runoffs. That tradition of excellence was continued in 2009, when Goodyear-shod cars won in open wheel formula classes, production classes, and Grand Touring classes and on both bias and radial constructions. Drivers racing on Goodyear rubber won both under dry conditions and in the rain.

Samuel Halkais, the 2009 SCCA champion in E Production, won his title in very wet conditions and said. "Thank God we had the new Goodyears. Thank you, Goodyear... I figured I'd keep going. The Goodyear tires kept biting and kept me going."

Goodyear continues as the exclusive tire supplier for the SCCA's Spec Racer Ford class, a category for purpose-built, single seat racecars. The tires Goodyear developed for SRF have been very popular with the competitors for their durability and competitive consistency.



GOOD



"New for the 2010 season
is the World Speed Motorsports' Formula
Speed 2.0 car... The new car is being
designed around .. a reasonably priced tire
that will last, and it is made right here in
the United States." - Mark Milazzo

"Sports car racing is a big part of Goodyear's racing heritage." - Greg Stucker

Goodyear will continue as the exclusive tire provider for the Star Mazda Championship presented by Goodyear and will begin an exciting, new program as the supplier for a new series conducted by World Speed Challenge's Formula Speed 2.0 car series.

Goodyear has been the only tire supplier the Star Mazda program has had, but Goodyear's development program kept busy anyway. The 2010 season will mark the second for the Challenge on Goodyear radial tires.

The Star Mazda Championship presented by Goodyear offers technically advanced single seat, open wheel cars, which race on both road racing circuits and ovals. The program offers both national and regional events and further breaks down into age group classes.

"Our relationship with the Star Mazda Championship presented

by Goodyear is very important to us," said Bob Shaffer, Goodyear's sales account manager for sports car racing. "We've seen drivers go through that series and move tire that we have the said to be a cars with t

by Goodyear is very important to us," said Bob Shaffer, Goodyear's sales account manager for sports car racing. "We've seen drivers go through that series and move on to other nationally prominent racing situations, but it's also important to note that many drivers feel the Star Mazda Championship is a goal itself. That is why we develop and build tires that perform consistently for every driver out there. The program is growing all over the country and we're right there with them."

New for the 2010 season is the World Speed Motorsports'

Formula Speed
2.0 car, which will
be raced in a series
of its own. The
World Speed
Motorsports
program is entering
its sixth season,
and has always
featured Mazda
powered formula

cars with Goodyear Racing tires.

"The new car is being designed around the Goodyear Racing Formula Eagle G19 which is a great tire that we have had a lot of experience with," World Speed's Operations Manager Mark Milazzo said. "It has two additional benefits; it is a reasonably priced tire that will last, and it is made right here in the United States."

The G19 is manufactured at Goodyear's Innovation Center Manufacturing in Akron, Ohio. When it comes to sports car tire development, Goodyear continues to lead the way.

## Points in Goodyear's Racing History

1901

Goodyear's first foray into racing, and its first victory, came when Henry Ford put Goodyear rubber on his car sponsored by the Detroit Driving Club.

### 1916

Goodyear launched its first serious race tire development program. Cars equipped with Goodyear Cord Tires began dominating U.S. racing circuits.

#### 1919

Goodyear tires were on the winning car in every major race this year, including the Indianapolis 500.

### 1922

Having accomplished its goals and faced with economic uncertainty, Goodyear dropped out of active racing participation.

1954
Goodyear conducted tire tests at Darlington, S.C., for the NASCAR Convertible Series. The featured Goodyear tire was the Police Special. It marked the unofficial re-entry into racing.

### 1957

Goodyear asked NASCAR drivers Lee Petty and Darel Dieringer to do limited race tire testing in West Palm Beach, Fla.



### 1958

The company's official re-entry into racing.

### 1959

At NASCAR's Darlington race, Goodyear went head to head against Firestone, Driver Jim Reed finished first on Goodyear tires.



### 1960

Goodyear won its first international sports cars race with Maserati driver Stirling Moss at the Grand Prix of Cuba, and won the Daytona 500.

**1963** A.J. Foyt persuaded Goodyear to authorize a development program for the Indy 500, after a 44-year absence.

### 1964

Foyt won the Indy Car season's first race (Phoenix) on Goodyear racing tires.

Goodyear won the 24 Hours of Le Mans with Dan Gurney and Bob Bondurant in a GT Cobra.

## 1965

Twelve Indianapolis 500 cars ran on Goodyear tires, starting the Indy Car phase of the tire war with Firestone.

Goodyear developed the crashworthy fuel cell for Indianapolis-style cars. to reduce the risk of fire.

Goodyear won its first Formula One World Championship title.

## 1966

Goodyear produced its Lifeguard Inner Liner Safety Spare for NASCAR stock car racing, referred to as the "tire within a tire." NASCAR mandated its use. Goodyear shared its tire safety technology, even in the throes of a tire war.



A.J. Foyt rolled into Victory Lane at the Indianapolis 500 on Goodyear tires - the company's first Indy 500 win since its re-emergence in racing.

Since 1968, every NASCAR champion of the premier Sprint Cup (formerly Nextel, Winston Cup and Grand National) has been on

Goodyear tires.

Firestone withdrew from all forms of racing.

### 1978

The tire war began between Goodyear and Michelin in Formula One racing.



## 1980

Goodyear's Eagle tire replaced Blue Streak as the official designation for its racing tires. The company's high-performance passenger tires also adopted the Eagle name.

Formula One race tire production moved to Akron, Ohio, from Wolverhampton, England.

Goodyear withdrew temporarily from Formula One racing from December 1980 to June 1981.

## 1982

Since the startup of the NASCAR Nationwide (formerly Busch) Series in 1982, all the champions have won on Goodyear Eagles.

Goodyear's radial rain tire for Formula One cars introduced at the Monaco Grand Prix, featured a unidirectional "Gatorback" tread pattern.

Goodyear introduced its radial slick tread tires to Formula One. The first radial victory was at the Belgium Grand Prix.

Michelin withdrew from Formula One racing.

Hoosier, a Lakeville, Ind., racing tire company, competed with Goodyear in the NASCAR Nationwide Series.

### 1988

Hoosier entered NASCAR Sprint Cup racing. A Hoosier win at Richmond, Va., stalled Goodyear's Cup win streak at 464.

### 1989

Goodyear introduced the radial tire at North Wilkesboro, N.C. - and Dale Earnhardt won the race. Hoosier soon withdrew from NASCAR's top tier.

Goodyear's tubeless version of the inner liner safety spare, or shield, was introduced. It eliminated the innertube and most tire air equalization.

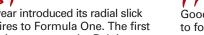
Goodyear introduced its Short Track Special racing Eagle for asphalt tracks and launched new yellow-lettered Eagle race tires for Sprint Cup.

Every race on the Sprint Cup schedule ran on the new breed of Goodyear Eagle radial racing tires. Bias-ply tires were relegated to the history books.

The Aquatro wet weather tire was introduced in Formula One.

Hoosier returned to Sprint Cup and Nationwide racing, but withdrew at the end of the season.

Goodvear reached two milestones: the 300th victory in Formula One at Barcelona, Spain, and the 300th consecutive victory in Indy Car at Vancouver, B.C.



Goodyear was the sole tire supplier to four top racing series, all with open tire rules: Formula One, NASCAR Sprint Cup, NASCAR Nationwide and NHRA drag racing's top classes.

The 1,000th Goodyear victory in Sprint Cup racing was reached in April by Jeff Gordon at Bristol.

In competition with Bridgestone on the Indy Car circuit, Goodyear won 15 of 17 races, including the Indianapolis 500.

### 1996

The Indy Racing League was formed, splitting from CART. Goodvear continued to battle Bridgestone in both series.

In April, Goodyear became the "Exclusive Tire Supplier for NASCAR's top three series."

Goodyear introduced its wet racing tire for NASCAR Sprint Cup, Nationwide Series and Craftsman Truck road course events.

After 368 victories and 25 Drivers' World Championships in Formula One, Goodyear resigned as a tire supplier after the 1998 season.

Goodyear left open wheel racing's CART and IRL series. In the four-year IRL history, Goodyear earned two driver titles, two tire manufacturer titles, two Indy 500 wins and 17 total victories.

Goodyear's joint effort with the General Motors Corvette racing program paid off with the brand's first two road racing victories.

## 2001

Goodyear was named the sole tire supplier to the NHRA's Top Fuel and Funny Car classes.

### 2002

Just 18 Eagle radial tire codes served the Sprint Cup, Nationwide and Craftsman Truck Series, where Goodyear is the official tire supplier through 2012. The company had compiled 1,260 Sprint Cup victories.

During its return to NASCAR North Series, Goodyear tires helped set 11 track qualifying records.

#### 2003

Goodvear became the sole supplier to the new NASCAR Grand National Division's West and Busch North series.

Production of bias-ply tires for sports, sprints and drag racers returned to

the Akron Innovation Center Manufacturing Plant from Goodyear's Santiago, Chile, plant.

Grand-Am's new Daytona Prototype sports car class competed solely on Goodyear

#### 2004 Goodvear

celebrated 50 non-stop years of NASCAR involvement.

Goodyear linked its Wrangler light truck and SUV tire marketing to NASCAR racing by stamping the brand on the sidewalls of the Craftsman Truck Series tires.

### 2005

Goodyear marked the Eagle tire brand's 25th anniversary, for both race and street tires. The NASCAR Sprint Cup Series logged a running tally of 1,374 Goodyear victories.

## 2006

An industry first, Goodyear employed RFID technology on a production scale to track tires under a new leasing program in NASCAR's top three series.

All race tire production is under one roof at the Akron Innovation Center complex.

## 2007

Goodyear and NASCAR signed an agreement extending Goodyear's official tire supplier status through 2012 for the top three series.

NASCAR's Car of Tomorrow debuted and ran in 16 of 36 Sprint Cup races.

## 2008

Tire development continued for the Car of Tomorrow. NASCAR ran it full time for the first time at every Sprint Cup race.

### 2009

Goodyear developed a NASCAR rain tire with a tread pattern based on the popular Eagle F1 All Season street tire.



# 2009 Goodyear Racing Champions



Jimmie Johnson receives his fourth consecutive Goodyear Gold Car from Goodyear's Chairman and CEO Bob Keegan. The Goodyear Gold Car, a 24-carat gold replica of the Sprint Cup champion's car, is hand engraved each year by artist Michael Dunlap, who has been sculpting the award since 1985. The presentation was made at NASCAR's year-end banquet in December.

#### **Oval Track Racing**

#### NASCAR Champions

**Sprint Cup Series** Jimmie Johnson Kyle Busch Nationwide Series Craftsman Truck Series Ron Hornaday Jr.

Camping World

Series East Ryan Truex

Camping World

Jason Bowles Series West Canadian Tire Series **Andrew Ranger** NASCAR Mexico German Quiroga

American

Canadian Tour Brian Hoar Serie ACT Castrol **Donald Theetge UARA-STARS** Matt McCall **ASA Northwest** Gary Lewis **ICAR** Corey Juhnke Big 8 Ross Kenseth **USLMA** Danny Burston

#### Dirt Racing Champions

FASTRAK Weekly Racing

Late Model Division A.J. Diemel

**FASTRAK National** 

Late Model Shanon Buckingham **NDRA Hunter Peacock** 

#### **Drag Racing**

#### NHRA Champions

Top Fuel Tony Schumacher Funny Car Robert Hight Pro Stock Mike Edwards Top Alcohol Dragster Bill Reichert Competition Eliminator Bruno Massel Stock Eliminator **Edmond Richardson** Super Comp Jim Perry Jr.

#### **IHRA Champions**

Top Fuel Del Cox, Jr.

Elite Motorsports

John MonteCalvo Pro Stock

#### **PSCA Champion**

Pro Street Randy Walker



#### **Sports Car Racing**

#### SCCA National Champions

Cliff Eben GT1 GT3 Ric Buchey GT Lite Jim Dentici **E** Production Samuel Halkias Mark Carpenter F Production H Production Dan Meller Formula Mazda Juan Marchand Spec Racer Ford Mike Miserendino

SCCA Pro Racing

Trans-Am Tomy Drissi

#### Star Mazda Championship presented by Goodyear

National Adam Christodolou Expert Chris Cumming Masters Michael Guasch

#### Champions of Formula Car Challenge presented by Goodyear

SFM Class Bill Weaver PFM Class Chuck Hulse

#### **Motorcycle Racing**

#### ASA Flat Track Champions

Pro Grand

**National Singles** Henry Wiles

Pro Grand

**National Twins** Jared Mees



