



Interview

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Interview with Jean-Pierre Jeusette, Goodyear Director Tire Technology Consumer Tires for Europe, Middle East and Africa

“Goodyear addresses environmental challenges: EfficientGrip reduces car’s fuel consumption”

Goodyear has announced European wide the brand-new ultra-high performance summer tire EfficientGrip with ‘FuelSaving Technology’. Jean-Pierre Jeusette, Director Tire Technology Consumer Tires for Europe, Middle East and Africa, who is based in Goodyear’s Technical Center in Luxembourg and who has been in charge of the product development, talks about the company’s passion for this new tire and the challenges during its development.



Why are you presenting a tire that reduces fuel consumption and CO₂ emissions? Do consumers really care about this?

Over the past few years, the awareness for environmental topics, also linked to CO₂ emissions, has increased at all levels – political, industrial and at consumer level. Across Europe drivers and vehicle manufacturers are facing an increasing number of regulations on vehicles’ emissions. For example, many countries have introduced or are planning new taxation rules based on a car’s fuel consumption or CO₂ emissions and some cities in Europe can only be accessed with low-emission cars at certain times. Many governments financially support the purchase of these cars. On top of this, consumers have recently experienced relatively high fuel prices. Because of all these trends, both vehicle manufacturers and consumers increasingly demand tires that have a positive impact on the car’s fuel consumption and, ultimately, are more environmentally friendly.



You mentioned that vehicle manufacturers show interest in low rolling resistance tires. What's the influence of a tire on a car's fuel consumption? Do tires really play a role?

The car makers' demands were indeed one of the key reasons why we have developed the new Goodyear EfficientGrip. The new CO₂ related European legal requirements put great pressure on car manufacturers to develop vehicles with reduced fuel consumption and lower emission levels. And tires play a key role in the overall fuel consumption of a car: up to 20 percent of the car's fuel consumption can be accredited to its tires. The Goodyear EfficientGrip has been closely developed with leading car makers. For example, the Mercedes E-Class and the new Renault Megane 3 will be equipped with the EfficientGrip directly in the car makers' factories – just to mention two.

What exactly does 'FuelSaving Technology' comprise?

The term 'FuelSaving Technology' comprises several technology advances which directly affect the tire's rolling resistance: an improved tire construction with special lightweight materials; an enhanced building and manufacturing process and an innovative compound technology with a new material formulation that delivers excellent results in mileage, wet braking and rolling resistance.

How does a tire influence the car's overall fuel consumption?

The key technical term tire engineers use in this context is 'rolling resistance'. Simply imagine a steel ball and a rubber ball rolling on a smooth surface. Both balls will gradually slow down and finally stop but the steel ball will run further due to its lower rolling resistance.

Lower rolling resistance tires reduce the energy loss and heat generation in different tire components. This can effectively reduce the amount of energy required from the vehicle's engine and thus lead to an improved fuel economy. Less rolling resistance therefore simply means less fuel consumption. Rolling resistance of a tire is influenced by various factors and we analyze many parameters during tire development.

How difficult is it to improve rolling resistance of a tire?

The challenge during tire development is, not to allow other performance areas to be compromised while trying to improve one particular parameter like rolling resistance. Goodyear's philosophy is clear: Environmental objectives are important but the key focus remains on the safety relevant performances such as the tire's wet braking or wet



handling performance. Our goal was to develop a tire with low rolling resistance and – at the same time – high levels of wet performance. With the EfficientGrip we have indeed reached both objectives: The EfficientGrip shows an excellent wet braking and handling performance in combination with significantly less rolling resistance which delivers greater fuel savings. Consumers will also appreciate the tire's high mileage potential which is good for the wallet and friendlier towards the environment.

What is it exactly that you look at when you try to improve the tire's 'rolling resistance'?

Let's look at tire physics for a moment: rolling resistance is mainly caused by the energy loss due to the deformation of the tire. Less deformation means less energy loss and hence, less rolling resistance. Goodyear engineers used the latest computer simulation technologies to analyze the tire's potential deformation behavior during driving. To reduce tire deformation you need to look at all parts of the tire and not only at one element. For the EfficientGrip, we developed a new tire shape and structure and used materials that are very strong and light-weight. For the tire's wet performance, we mainly improved the tread design with its grooves and blades and developed an innovative silica tread compound.

To whom would you recommend your new low rolling resistance tire EfficientGrip?

The EfficientGrip is the right choice for drivers of high-performance and family cars who think about their car's fuel consumption and at the same time expect excellent braking and handling performance on wet roads. For these safety and environment-conscious drivers, the EfficientGrip is the right choice. These consumers are generally also more aware of the consequences of their overall driving style on the car's fuel consumption – such as unnecessarily aggressive acceleration - and the importance of maintaining the right tire pressures.

What can drivers do to make sure their tires perform optimally in terms of rolling resistance?

Drivers should pay attention to having their tires inflated to the recommended pressure. Over and under-inflation might have an impact on the car's overall handling performance, increase braking distances and reduce the potential tire mileage. Under-inflated tires should also be avoided because under-inflation increases tire



deformation and hence rolling resistance. Increased rolling resistance has a negative impact on fuel consumption and carbon emissions. If you want to improve your car's fuel consumption, it is very important that you maintain the recommended tire pressures.

About Goodyear

Goodyear is one of the world's largest tire companies. Goodyear employs approximately 75,000 people and manufactures its products in more than 60 facilities in 25 countries around the world.

Goodyear's innovations have set automotive standards for more than 100 years. Goodyear has been the pioneer of the innovative safety technology known as RunOnFlat, which allows a driver to continue on a journey with a punctured tire. Goodyear is the world's leading manufacturer of RunOnFlat tires, with applications on various BMWs, the award winning Mini, Mercedes-Benz high performance cars, Opel and other brands. Additional Goodyear RunOnFlat fitments are on the horizon, as the company's designers are working with multiple automobile manufacturers on more than 150 RunOnFlat projects.

For more information on Goodyear and its products, visit www.goodyear.com.