

**MEDIA RELEASE**  
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**GOODYEAR AND NASA INVENT 'SPRING TYRE' FOR MOON,  
POSSIBLY EARTH**  
***TEAM DEVELOPS ENERGY EFFICIENT TYRE THAT WON'T GO FLAT***

AKRON, Ohio. The US National Aeronautics and Space Administration (NASA) and The Goodyear Tire & Rubber Company (NYSE: GT) have developed an airless tyre to transport large, long-range vehicles across the surface of the moon.

The new "Spring Tyre", with 800 load-bearing springs, is designed to carry much heavier vehicles over much greater distances than the wire mesh tyre previously used on the Apollo Lunar Roving Vehicle (LRV). The new tyre will allow for broader exploration and the eventual development and maintenance of a lunar outpost.

According to Vivake Asnani, NASA's principal investigator at the Glenn Research Centre in Cleveland, this was a significant change in requirements that required innovation. "With the combined requirements of increased load and life, we needed to make a fundamental change to the original moon tyre," he said. "What the Goodyear-NASA team developed is an innovative, yet simple network of interwoven springs that does the job. The tyre design seems almost obvious in retrospect, as most good inventions do."

According to Goodyear engineers, development of the original Apollo lunar mission tyres, and the new Spring Tyre were driven by the fact that traditional rubber, pneumatic (air-filled) tyres used on Earth have little utility on the moon. This is because rubber properties vary significantly between the extreme cold and hot temperatures experienced in the shaded and directly sunlit areas of the moon. Furthermore, unfiltered solar radiation degrades rubber, and pneumatic tyres pose an unacceptable risk of deflation.

According to Asnani, the Spring Tyre does not have a "single point failure mode. What that means," he said, "is that a hard impact that might cause a pneumatic tyre to puncture and deflate would only damage one of the 800 load bearing springs. Along with having this ultra-redundant characteristic, the tyre has a combination of overall stiffness yet flexibility that allows off-road vehicles to travel fast over rough terrain with relatively little motion being transferred to the vehicle."

NASA has been so impressed with the tyre that it decided to highlight the project during NASA's recent "Day on the Hill" exhibit at the Rayburn House Office Building in Washington, DC. "I spoke with 10 to 15 members of Congress and about sixty staffers," noted NASA's Asnani. "Virtually everyone I spoke with was blown away by the idea that this technology may one day be used, not only for extraterrestrial vehicles, but also, perhaps, for vehicles here on Earth."

Additionally, NASA has highlighted this technology development in its annual Hallmarks of Success video series. The series features NASA's most positive corporate team efforts. Goodyear was one of only 11 corporations - and the only tyre company - included in the video. Those interested in viewing the video may do so at [http://www.nasa.gov/offices/ipp/video/hallmarks\\_moon\\_tires\\_index.html](http://www.nasa.gov/offices/ipp/video/hallmarks_moon_tires_index.html).

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**About Goodyear**

Goodyear is one of the world's largest tyre companies. It employs approximately 70,000 people and manufactures its products in more than 60 facilities in 25 countries around the world. For more information on Goodyear and its products, visit [www.goodyear.com](http://www.goodyear.com)