



Passenger Cars:

Safer, Longer-Wearing Tires

Beginning in 1908 with a small chemical laboratory in the corner of the first plant, the company has invested many millions of dollars in laboratories and testing facilities. Today's motorists are driving on safe, long-wearing tires because of the work of Firestone technical people who originate the designs and compounds for tires, control the methods by which they are manufactured, and test materials and products before, during and after service.

Harvey S. Firestone founded the company in 1900 in Akron, Ohio, to sell solid rubber buggy tires made by other firms. That year he introduced the first solid rubber side-wire tire.

Not satisfied with the quality of the tires available to sell, Mr. Firestone started his own factory in 1903 with 12 employees to make buggy tires, and later horseshoe pads.

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SINCE THEN there has been a steady stream of new Firestone tire developments, constant expansion of facilities and entry into many new fields. Today you can buy new Firestone tires nearly everywhere in the free world.

Between 1900 and 1905 auto registrations rose from 8,000 to 77,000 in the United States and Canadians were beginning to register motor vehicles. The first mass production had been started by Ransom E. Olds and Henry Ford was abandoning expensive touring cars for low-priced runabouts. The automobile was no longer a luxury.

The autos required tires with more resiliency and wider treads than the narrow solid tires. The first pneumatics used were single-tube bicycle tires, but tires with inner tubes were soon adopted, the highly inflated tube providing a sturdy yet elastic body of compressed air to sustain the outer casing and cushion shocks. The early tubed pneumatics, clinchers, were inferior. Motorists endured punctures, blowouts and exasperating tire changes.

Mr. Firestone put his staff to work to remove the clincher principle. A wire cable was inserted in the bead, and the tire was clamped to the wheel by bolted rim flanges, the clincher pinching hooks being eliminated. The result was the first mechanically fastened straight-side tire, developed in 1904.

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OTHER HIGHLIGHTS of the company's early history in tires were the introduction of the universal rim to accommodate either the straight-side or the clincher tire, development of the first commercial demountable rim, and introduction of the first angular non-skid tire tread.

The first experiments in the use of cord fabric for automobile tires as a replacement for square-woven fabric were conducted by the company in 1915. Firestone perfected a method of insulating tire cords against internal heat by its now famous "Gum-Dipping" process, developed the industry's first low pressure balloon tire.

Through the years, the company has resisted invalid patent monopolies by winning patent suits involving demountable rims; tire building machinery; machinery for building tires by the flat-band process, a method of applying cord fabric to a drum in endless bands; and lastly, tubeless tires.

In 1959 Firestone observed its 50th anniversary in auto racing, and received a special commemorative plaque from the Indianapolis Motor Speedway where Firestone tires were on the winning car in the first race in 1909. In 1911 the first 500-Mile Sweepstakes was held there, with the winner on Firestone tires. On this great proving ground for tires, Firestone tires were on the winning car in 1965 for the 42nd consecutive time. (The race was not held during World War I and World War II years.)

Firestone has used this great speed and endurance proving ground for testing developments later applied to passenger car and other tires.

The balloon tire was used in the 1925 race when Peter De Paolo went 500 miles at an average speed of 101.13 miles per hour, the first driver to break the 100-mile-an-hour mark.

Mr. Firestone's last great thrill of accomplishment at Indianapolis before his death on February 7, 1938, was in the 1937 race when Wilbur Shaw set a new record of 113.580 miles per hour and was lavish in his praise of Firestone tires and "the man who builds them."

Floyd Roberts in 1938 continued the trend toward higher speed tires when he went the route at Indianapolis at an average speed of 117.2 miles per hour. An innovation in the 1938 tire was the use of tread stock on the two outside plies to give the tire more strength. This and other changes in the Firestone Champion racing tire were important factors in the development of high-speed tires for World War II aircraft.

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FIRESTONE was the first company to make tires of rayon cord, in 1933. In search of cord materials other than cotton, Firestone laboratories conducted research in the use of synthetic silk, rayon and other cellulose products in the 1920's. Tests continued during the early Thirties and in 1933 Firestone built airplane tires with rayon cord which were tested at Wright Field in 1934. In October, 1934, satisfactory rayon cord was received from a supplier and successfully built into heavy duty truck tires.

The first production tires of rayon cord were made in February, 1937, and in 1938 Firestone introduced the Firestone Imperial passenger car tire with rayon gum-dipped cord fabric, a ply material of the highest known degree of strength and flexibility, giving minimum internal heat.

Just prior to the war, Firestone Steel Products Company developed a wide rim wheel that reduced the unsprung weight of race cars by 60 pounds. This weight reduction increased the speed potential of cars. America's motorists were introduced to the rim in 1940 after

thousands of successful test miles had been run both in the Memorial Day race and on a special test program. The rim provided two important safety features, increased traction and greater stability in turns.

In 1941, rubber companies decided to put their products on the line in a special test on the nation's first superhighway, the Pennsylvania Turnpike. A series of tire tests was conducted, all in excess of 100 miles per hour. The company's speedway research paid off when at the conclusion of the tests it was revealed that the Firestone product was the only tire to complete the series of tests satisfactorily.

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AT THE OUTBREAK of World War II, industrial mobilization was a critical problem. To speed the production of high-speed fighter plane tires, Firestone's race tire formula was turned over to the government. Race construction was then ordered for all aircraft tires.

Synthetic rubber became a by-product of the war. To offset adverse publicity which circulated when the new rubber first came on the market, Firestone, with the cooperation of the Federal Government and the American Automobile Association, conducted a series of high-speed tests on the Indianapolis track. The track, closed for the duration, was circled 200 times by Wilbur Shaw at an average speed of more than 100 miles per hour. The 500-mile durability run proved the quality of synthetic rubber and paved the way for the dozens of synthetics which are used in today's tires. Synthetic rubber first was used in racing tires in 1946 for the first postwar Memorial Day 500-mile race.

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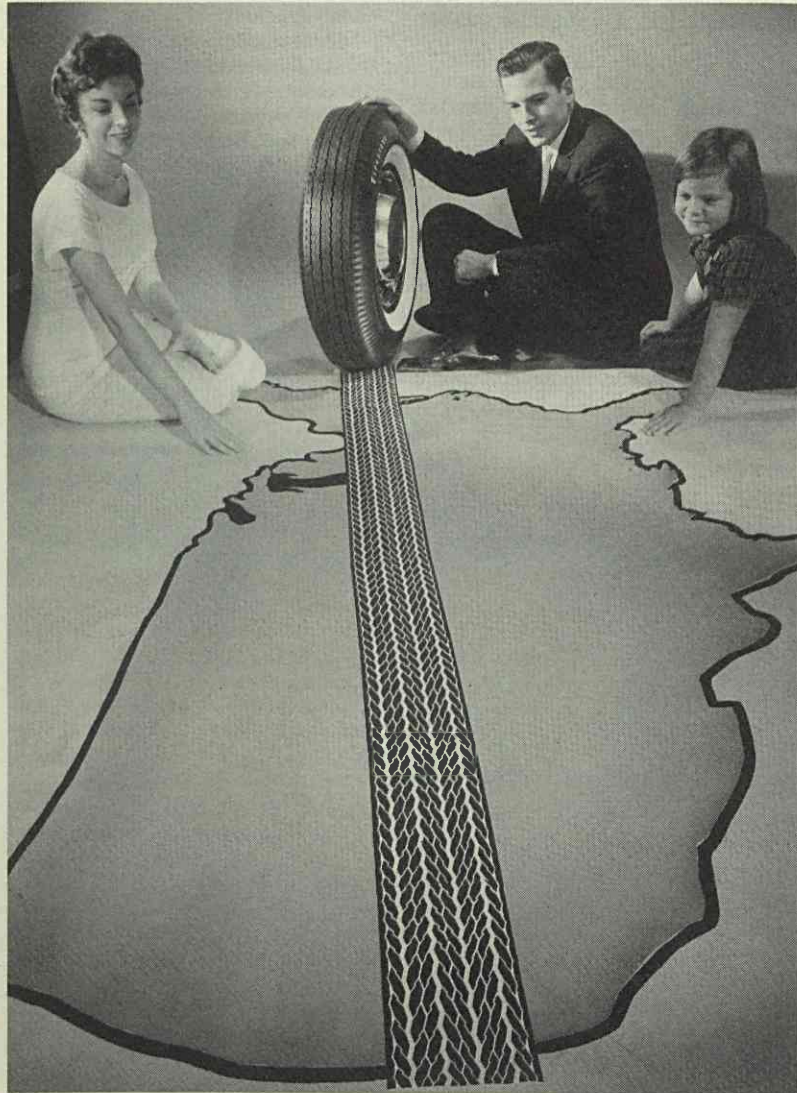
SIMULTANEOUSLY with the work of reconversion after World War II, research and development programs were enlarged and intensified. This was especially true in the field of developing a tubeless tire, a program initiated during the war as a means of conserving rubber.

The company was successful in developing a tubeless tire that was blowout-safe and puncture-proof. For several years Firestone development engineers worked on this project, and in January, 1951, the company announced that it was producing this tire, since then even more improved and called the "Premium Quality," a premium-priced tire.

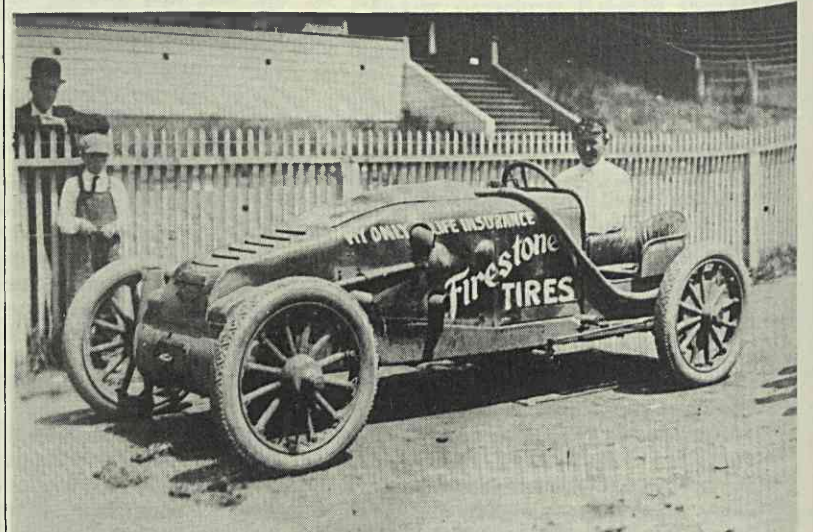
While this first of Firestone's now complete line of tubeless passenger car and truck tires was being developed, the company started a second program to develop a tubeless tire that could be sold at a non-premium price, or at the price of the conventional tire and tube.

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THESE AUTOMOBILES symbolize the 76 million vehicles on our streets and highways and the ever-increasing market they represent. In 1900 automobile registrations totaled 8,000 in the United States. From that year when the company was founded to the present, the company has successfully kept pace with the needs of the growing numbers of owners of automobiles and other vehicles.



STANDARD EQUIPMENT on 1961 passenger cars was the new De Luxe Champion tire with "all action" tread, designed to give up to 36 per cent more mileage than previous original equipment tires. Announced in 1960, the tire gave the average motoring family extra tire mileage in a year equivalent to a cross-country trip.



BARNEY OLDFIELD, one of the earliest American speed drivers, called Firestone tires his "only life insurance."