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results. This was as true in 1900 as it is today.

Perhaps the greatest basic difference between the early American high-performance cars and their counterparts today is in the matter of price. In the early days, special high-performance sports models cost anywhere from two to 20 times as much as standard models. The average was five times as much. Only the wealthy could afford them. These special cars were more or less hand-built in small quantities. They had special engines and chassis, and bodies that were tailored to the performance function and not interchangeable with standard models produced by the same company. The young car enthusiast of 1915, or even 20 years later in 1935, could only dream of perhaps riding in one of these expensive cars. He had little hope of ever driving or owning one.

HIGH-PERFORMANCE motoring once was strictly a rich man's game. Not so today. Current high-performance cars such as the GTO, Olds 4-4-2, Plymouth GTX and Fairlane GT are mild conversions of mass-produced standard cars. They are powered by factory modified production engines, feature stock bodies with some special trim and interior appointments, heavy-duty suspensions and brakes, and are offered with a long list of special performance and convenience options. Their prices are only a few hundred dollars more than their standard cousins, not more than 20% higher in overall price. Even the high-performance specialty cars of today, such as the Corvette, use many mass-produced

components and cost less than twice what the standard car costs. A very broad segment of today's market can afford these specialty cars.

Before World War I the two most popular high-performance cars in this country were the Mercer Raceabout and the Stutz Bearcat. They were quite similar in layout and concept. Both were powered by large 4-cyl. T-head engines of 300-400 cu. in. which delivered approximately 70 bhp at 2000-2500 rpm. There was really no body worthy of the name. A hood over the engine and two bucket seats in the open, perched on the frame rails, with the gas tank behind the seats was the sum total of bodywork. This out-in-the-open motoring would have been exciting even without acceleration or speed. Stutz and Mercer performance was excellent for the time. Top speed was approximately 80 mph and 0-60 mph acceleration was accomplished in 25 sec. Two-wheel brakes provided little stopping power. Crude leaf spring chassis with friction shock absorbers made handling skittish on the rough roads of the day. However, a number of wealthy men of that era seemed very willing to pay \$4000 for their automotive kicks.

The swift, small Mercer Raceabouts and Stutz Bearcats performed their way to a favored place in American automotive history.

Before World War I, an entirely different phase of the auto performance sport was starting. This was the hot rod business. Thousands of automobile enthusiasts who couldn't afford the special high-performance cars worked toward increasing the performance of their low-priced standard cars. The Ford Model T was the main raw material. In the 1920s a market developed in special speed equipment for the Model T. Home builders could buy

overhead valve cylinder heads, special carburetors, manifolds, pistons, camshafts, crankshafts, ignition systems and all kinds of chassis equipment, including brakes, rear axles, gears and wheels. Special open raceabout bodies also were available. No modern model has ever had so much attention from accessory manufacturers. In 1920, an enthusiast was able to build a Model T-based hot rod that retained little of the stock T other than the frame and cylinder block!

Performance was excellent. Horsepower generally was limited to approximately 50 by the small displacement of the T block (176 cu. in.); but weight could be as low as 1600 lb. Thus modified Ts were capable of top speeds in excess of 80 mph, and 0-60 mph times under 20 sec. A brand new T in those days was priced at \$400. Adding \$500-\$1000 for special equipment made the T a high-performance vehicle that could hold its own with anything, especially in acceleration up to 50 mph. The hot rod sport was born and has been going strong ever since.

IN THE 1920s, factory high-performance models became more closely related to their standard model cousins, more as is the situation today. This trend started when E. L. Cord took over the floundering Auburn Automobile Co. in 1924. His idea was to produce medium-priced passenger cars with better-than-average performance and handling, in body styling that projected a sporty, youthful image. He believed performance and styling would sell the cars in the medium market and a special boattail speedster body on a standard chassis would attract the well-heeled enthusiast to build the company's image. The plan worked to perfection. The Cord group boomed in the late '20s, almost entirely on the attrac-

BEARCAT TO BARRACUDA

Part I: Development of the American High-Performance Automobile

BY ROGER HUNTINGTON

BRUTE PERFORMANCE always has been a chief attraction of the automobile. Amusement park visitors pay good money for odd G-loads on thrill rides. These are nothing more than high acceleration forces acting in

different directions. An automobile that can deliver something special in acceleration, braking and cornering forces is bound to appeal to a broad market segment—almost anyone who is even mildly interested in cars. Per-

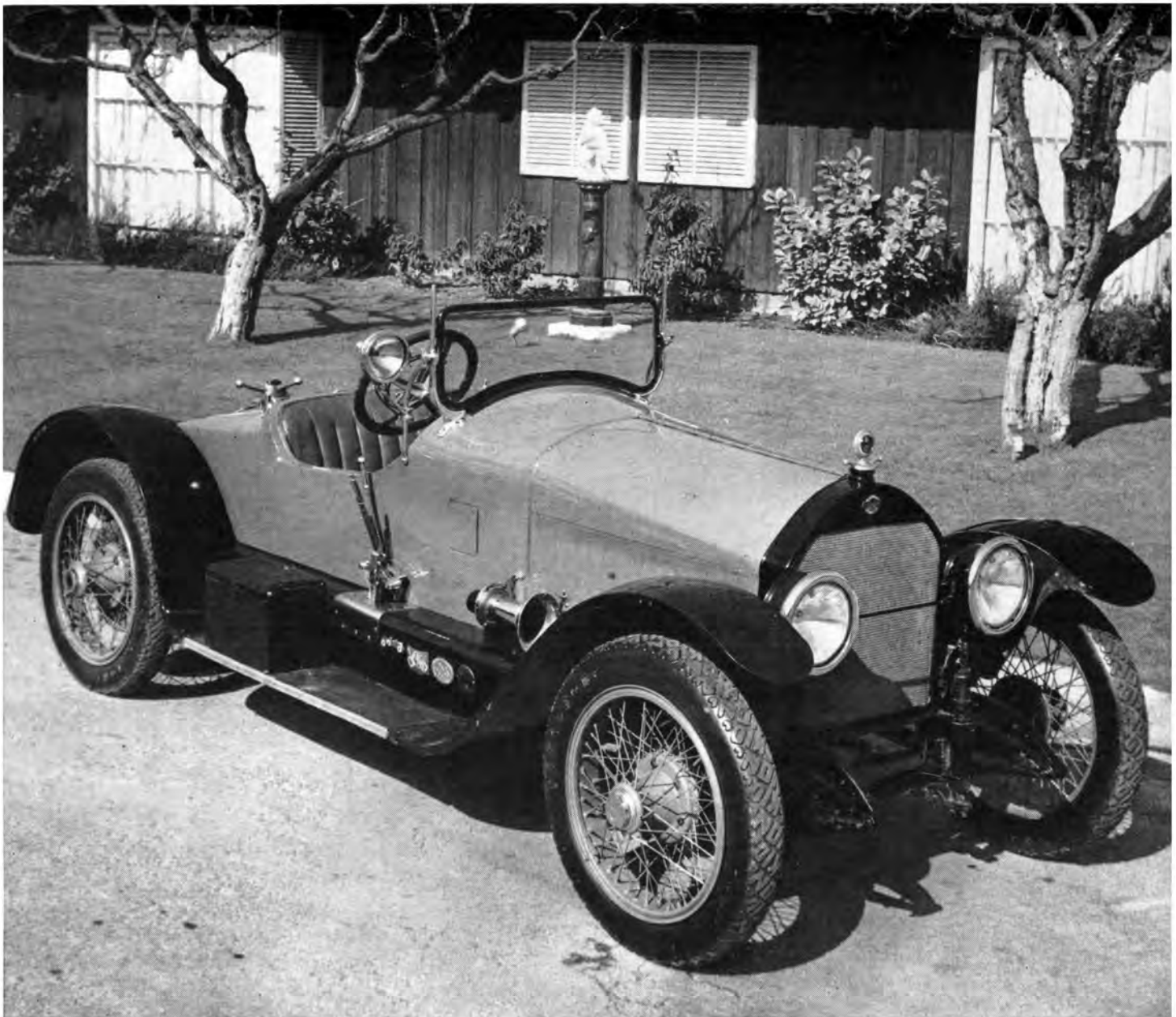
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Special high-performance cars have been in existence nearly as long as the automobile itself. As soon as the early experimenters built machines that would run reliably for more than a few miles, they started to seek greater performance. The basic weapons have not changed in 70 years. These weapons are large piston displacement, high horsepower and torque, light weight, proper gearing, good brakes, suspension design for good cornering and handling, and a body design that offers some hint of the mechanical potential underneath. The successful high-performance car not only must go, but it has to look like it goes. The image always has been as important as road

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MOZERT PHOTOS



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tion of performance and styling—with smart advertising and promotion of these features. The Cord story in the '20s was similar to Pontiac's rise on the performance theme in the late '50s.

In fact Stutz people copied the Cord idea with the famous Blackhawk speedster in 1927. The Stutz and Auburn speedsters of that period had straight-Eights in the 320-cu. in. /115-bhp range and would do 100 mph with proper gearing. The American Automobile Association Contest Board was pushing stock car racing on the fast board speedways then. Stutz and Auburn engaged in some thrilling duels at average speeds of 90-100 mph, with sometimes not more than a car length separating them in 100 miles! Today's

170-mph stock car races on the Daytona Speedway are no more exciting.

These special speedsters of the '20s were very expensive cars. Thus ownership was restricted to a very narrow segment of the market. They were playthings of the wealthy and image builders for the manufacturing companies. When the Depression hit in 1929, there was even less money to spend on cars. High-performance models grew even more rich and exotic. The epitome, of course, was the Model J Duesenberg from the Cord Corp. This featured a huge 420-cu. in. straight-Eight with double overhead cams operating 32 valves. Promoters claimed 265 bhp for the standard engine, and 320 bhp with optional super-

charger. The blown cars would do 120 mph at about 4500 rpm, with 0-60 mph times below 15 sec., though total weights exceeded 5000 lb. Prices ranged up to \$18,000. Needless to say, the majority of car fans of the '30s never saw a Duesenberg, much less rode in one. This was the "high-performance" car market of 30 years ago.

CORD WASN'T the only entry in this field. Stutz developed an exotic dohc 32-valve engine early in the '30s. The 156-bhp powerplant was put in a short-wheelbase Bearcat that sold for \$4600 and was guaranteed to surpass 100 mph. Only a handful were built. About this time, the luxury car builders started to push performance, because some of the highly tuned lower priced models were gradually gaining on them in this department. Luxury car builders definitely needed superior speed and acceleration to distinguish their products from the common herd. Huge V-12 and V-16 engines of up to 200 bhp were featured in luxury Cadillacs, Marmons, Packards, Pierce-

THE MERCER Raceabout was little more than four wheels and a powerful engine, but it made the wealthy playboy's heart beat faster in 1914.



THE LARGE T-head engine delivered approximately 70 bhp at 2500 rpm for the Mercer Raceabout.



THE DUESENBERG Model J of the 1930s was priced at up to \$20,000. Luxury and high performance were combined in this "Twenty Grand" model displayed at the 1933 Chicago World's Fair. A 265-bhp dohc engine produced speeds up to 110 mph.



Arrows and Lincolns of the early '30s. They would go. Top speeds of up to 100 mph and 0-60 mph times of 15 sec. were possible. This performance was a great deal better than the average car of that day.

As early as the mid-'30s, an attempt was made to offer really superior road performance in lower-priced cars. Several companies believed that performance could be a very potent sales tool if promoted properly. The Cord Corp. still was operating on this theory in the mid-1930s, though the Depression had the firm on the ropes. The supercharged Auburn of 1935 packed 150 bhp and sold for as low as \$1450. A blown boattail speedster set American Stock Car speed records up to 105 mph on the Bonneville Salt Flats that year. The front-wheel-drive Cord V-8 of 1936-37, definitely a medium-price car, was perhaps the most famous American high-performance car of all time. It had years-ahead styling and exceptional handling to go with the speed and acceleration. The supercharged models of 1937 delivered about 190 bhp, and

would approach 115 mph, with 0-60 in 13 sec.

Performance was filtering down into even lower-priced cars. The supercharged Gramms of the '30s could be bought for \$900. Top speeds were 95-100 mph with overdrive. The lowly Ford V-8 shouldn't be forgotten. It's doubtful if the elder Henry Ford had a performance champion in mind when he introduced the radical flathead V-8 engine in 1932. He wished to be the first to offer a compact 8-cyl. engine in a low-priced car to attract potential buyers away from the dreary 6-cyl. Chevrolets of the day. It was probably fortuitous that the resulting V-8 design delivered unusual performance—just as it was a lucky strike that the 265-cu. in. Chevrolet ohv V-8 turned out so strong in 1955.

AT ANY RATE, those little Ford V-8s of the 1930s changed the whole performance picture in the American car market. With only 85 bhp in cars that weighed under 3000 lb., the cars were capable of top speeds approach-

ing 90 mph and 0-60 times well under 15 sec. Some stripped 1934 V-8 roadsters were electrically timed at a flat 100 mph on a straightaway in a stock car race at Elgin, Ill. This was very radical stuff 30 years ago—when it could be bought off the showroom floor for only \$500.

Performance suddenly became available to almost everyone. This wasn't the neck-snapping acceleration of today's cars, but those early Ford V-8s offered performance almost equal to the more expensive "high-performance" models costing four or five times as much. As soon as a cheap, mass-produced engine with tremendous performance potential became available, the speed equipment industry again started to boom. Special bolt-on cylinder heads, manifolds, supercharger, camshafts and ignition equipment became available at low prices to increase engine performance. Many young car enthusiasts purchased such equipment in the late 1930s. There were no speed shops then so the equipment was bought by mail order through

AMONG EARLY high-performance cars was the Auburn Cabin Speedster. Interior was in aircraft style.



A SUPERCHARGED Auburn Speedster broke a number of U.S. stock car records at Bonneville with speeds of 105 mph.



PERHAPS THE most famous of American high-performance cars, the supercharged 1937 Cord V-8 demonstrated exceptional handling qualities as well as 115-mph top speed and 0-60 time of 13 sec. This was a very large offering for a medium-priced car.



BEARCAT TO BARRACUDA

magazine ads. By World War II it was not unusual to see a high school youngster with \$200 in a Ford that could exceed 100 mph, with 0-60 time near 10 sec.

Expensive high-performance factory models faded out of the picture after WW II. Flathead Fords, either in stripped hot rod form or with full bodies, were the order of the day. No standard factory-built cars could touch them. Prices were low enough so that anyone who desired could own a high-performance Ford. In the 1950s there were several attempts to market specialty sports-type cars in small numbers. The Kurtis roadster, the Muntz Jet, the Nash-Healey, the early Corvette with 150-bhp 6-cyl. engine. None of these ousted the modified Fords with the perennially car-crazy high school crowd.

Development of performance in standard factory models was intensified in the early 1950s. The early Olds

88 coupes with the then new short-stroke ohv V-8 Rocket engine (135 bhp) would reach 95 mph and 0-60 mph in 14 sec. The Hudson Hornet Six, with twin carburetors, also was in this class. Likewise were the early V-8 Dodges with the Red Ram Hemi engine. Any of these cars would stay with or beat a stock flathead Ford of the early 1950s. However, Ford's flathead had been adding more weight than bhp for years, though hopped-up Fords still ruled the roost.

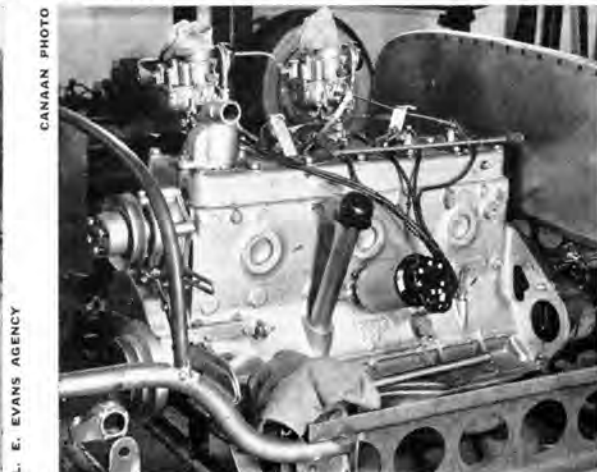
IT WAS THE little 265-cu. in. Chevrolet V-8 of 1955 that changed everything. This engine demonstrated exemplary breathing and high revolutions characteristics from the day it was introduced. Furthermore the Chevrolet V-8 almost overnight made the flathead Ford engine obsolete. Where hot rodders once thought of 175 bhp at 4500 rpm as a goal, the little Chevrolet engine suddenly offered 250 bhp at

6000 with only minor tuning. Performance for a hot street machine jumped overnight to a phenomenal 120-mph top speed and 8-9 sec. 0-60 mph time.

More important, the factory could offer this performance off the showroom floor, with less than \$200 worth of special equipment on the standard production V-8 engine. The buyer didn't have to build up his own engine with speed equipment from California as he once did with the old flathead Ford. Chevrolet could readily build high-performance cars right on the factory assembly line, alongside standard models. Thus was established the trend toward today's factory-built "Supercar." The only real difference between today's GTO and the '56 Corvette-engined Chevrolet is bucket seats, special suspension and identifying body trim. Ten years ago Detroit just sold enthusiasts the special engine. Today manufacturers wrap it up in a neat package that has improved handling and braking to match the speed—and something extra in looks to project the image.

And the price is down there where almost any dedicated car fan with a job and regular income can own a true "high-performance" car if he so desires. It wasn't always so. ■

THE KURTIS was one of a number of post-World War II limited production cars which helped develop American taste for high performance automobiles. The twin-carburetor Hudson Hornet Six, right, powered a Kurtis roadster model.



ONE THAT never made the grade, but helped whet the performance appetite, was the Muntz Jet.



AMONG SPECIALTY cars marketed in limited numbers in the 1950s was the sleek, sporting Nash-Healey.

