Muscle Cars Explained: History, Evolution & Buyer's Guide

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Today we'd like to present an in-depth guide about muscle cars, highlighting the beginnings and evolution of this powerful category of cars, illustrated by a number of pictures and informative videos. Without further ado, enjoy!

History

The American muscle car, introduced in 1949, is an essential component of the car industry. In response to the sudden demand for faster cars at this time, Oldsmobile débuted its Rocket 88. The Rocket 88 had a high-compression overhead valve V8 in a lightweight Oldsmobile body. The body was the same platform as the Oldsmobile 76, which was designed for a six cylinder engine. This combination created the definition of a muscle car: a car with a light body and a powerful engine. The Rocket 88 dominated the NASCAR circuit in 1950, escalating the craze for speed.



1949 Oldsmobile Rocket 88

Bootleggers

The need for fast cars started with prohibition in the 1920s. Moonshiners and bootleggers wanted to be able to outrun police vehicles, so they started modifying their cars. As the years passed and prohibition ended, the Southern moonshiners became infamous for their modified cars. The moonshiners transformed their cars due to the demand for speed, handling, and cargo capacity. By the 1940s, these cars progressed to be more efficient. The moonshining business was not nearly as profitable as it was during prohibition; the moonshiners started to use their cars for racing. These remodeled cars dominated the street racing circuits and thus inspired the Oldsmobile Rocket 88.



1955 Chrysler C-300

New Innovation

The muscle car industry took off over the 1950s. The Rocket 88 was soon surrounded by competition. Two significant contributions to the industry were the Chrysler Corporation Hemi and the Chevrolet small-block V8. A Hemi is a series of V8 engines with a hemispherical combustion chamber originally made by Chrysler in 1951. A hemispherical combustion chamber basically has the valves of the cylinders facing each other improving the engine's airflow capacity and yielding a higher power output. Chrysler coined and marketed the term "Hemi," but other automakers have developed similar designs. The Hemi was introduced the 1955 Chrysler C-300, giving it 300hp and its historic name. The C-300 became known as "America's Most Powerful Car."

The small-block V8, made in 1955, was essential for developing lightweight muscle cars. The engine became a GM corporate standard and was used in their cars for 50 years. Throughout the 1950s, American automakers continued to make groundbreaking contributions to performance cars, such as Chevrolet's mechanical fuel injection. Big, powerful engines in lightweight cars resulted in incredible speed but poor handling. Compellingly, drag racing grew in popularity.

The Ban on Auto Racing

The momentum of the muscle car industry came to a momentary stop when the Automobile Manufacturers Association decided to put a ban on factory-sponsored racing in 1957. Manufacturers would not advertise performance-related components of their passenger cars, publicize results, or associate their vehicles with auto racing in any way. The ban was in response to an accident at the 1955 24 Hours of Le Mans race. Pierre Levegh, driving a Mercedes-Benz, brushed another car, sending him crashing into the stands at 150mph. The car's fuel tank

ruptured and the car exploded into flames. The combustion along with rocketing car fragments resulted in 84 deaths including that of Pierre Levegh. This is known as the most catastrophic accident in motorsports history. Mercedes-Benz stopped racing that year and returned to the track 32 years later. Switzerland banned auto racing and lifted the ban only recently in 2007. When the Automobile Manufacturers Association met in 1957, the president of GM, Harlow Curtice, suggested a self-imposed auto racing ban. The industry anticipated this ban would pre-empt the government from imposing racing regulations. However, the automakers involved in the Automobile Manufacturers Association could not keep up with competition from non-association carmakers, and the ban was lifted in 1963.



Pontiac Tempest GTO

Progress Again

Speed mattered most as drag racing held its vast popularity into the early 60s. The engines developed and grew while the cars remained the same size. Performance models of cars were also being produced. The 1962 Dodge Dart was a cornerstone of early 60s muscle cars because it had a 13 second quarter-mile drag-strip run. As the desire for faster drag times grew, manufacturers focused their resources on creating faster cars. Dodge and Plymouth dropped their big cars and the 1963 Pontiac Super Duty had a lightening-hole "swiss cheese" frame. This meant grapefruit size holes were drilled into the chassis rails which made the car significantly lighter.

The Golden Age

In 1964, Pontiac released the Tempest GTO ushering in the Golden Age of muscle cars. First of all, GTO was an abbreviation for **G**ran **T**urismo **O**mologato or translated Grand Tourer Homologation, which basically meant the car

was approved for races. The GTO had both the appeal and the muscle to make it a benchmark in muscle car history. It deceptively looked like a simple Tempest and offered an option that bypassed a GM rule of producing midsize cars with engines greater than 330 CID. (CID stands for cubic inch displacement and is used to measure the volume of an engine's cylinders and combustion chamber. This unit of measurement is no longer used today, 330 CID engine equals 5.4 liters.) At the low price of \$3,200, the Pontiac GTO was affordable to younger people. In its first year, Pontiac sold over six times as many cars as predicted. In the same year, Ford introduced the Thunderbolt with a staggering 427 CID. It was deemed dangerous to drive, and although only 127 were made, it is still remembered as an excellent muscle car.

The Ford Mustang was also released in 1964. The Mustang came with sharp looks, plenty of options, and a low price, but deficient power. As a result, it created a new market: the pony car. Pony cars are often confused with muscle cars because they look similar and some have power. But like the GTO, looks can be deceiving and the power of a pony car is to a great extent inferior to that of a muscle car. A few well-known pony cars are the Chevrolet Camaro, Dodge Challenger, and Plymouth Barracuda. Contrary to popular belief, the Corvettes of the 1960s era were not considered muscle or pony cars.

In 1967, Ford upgraded the Mustang from a small-block to a 390 CID big-block engine. Ford impressively had a 428 CID engine made by Carroll Shelby. Other automakers turned out competitive cars like the Chevrolet Camaro and the Pontiac Firebird. Plymouth tried to diversify by making a budget muscle car: the Road Runner. Soon the market became saturated and the automotive companies started losing money.



1969 Dodge Charger Daytona

In 1968, federal safety and emissions rules came into play. There was also a new safety lobby led by attorney Ralph Nader. These influences and regulations could have threatened the industry; yet with the 70s steadily approaching, the muscle car industry was at its peak. The Camaro, Mustang, and Firebird were being spectacularly upgraded. The GTO dropped in price and was presented with an entirely new look; hood scoops was prominent as well. The Dodge Charger became exceptionally popular and the Daytona model was specifically famous for its wing. GM returned to the pony car scene by redesigning the Camaro and Firebird. The muscle and pony car

industry was booming at the end of the decade, but a crash was imminent.



1970 Pontiac Firebird

The Death of the Muscle Car

The early 70s brought about change in the auto industry. The government put in new emission limits and carmakers started producing engines that ran on low-lead fuel. Manufacturers detuned the powerful engines of the 1960s to meet the government standards. New federal motor vehicle safety standards forced automakers to change the bumpers to heavier, sturdier metals, adding weight and further cutting performance. These new restrictions significantly downgraded the performance of the muscle cars.

In 1973, OPEC cut oil exports to the United States. This was the first oil crisis the United States ever faced and fuel shortages caused a shocking spike in gas prices. Insurance companies cracked down on performance cars because the muscle cars of the late 60s were deemed unsafe. This, coupled with inflation, made the price of owning a muscle car too high for the target market. It made more sense for Americans to buy small compact cars, both imported and from Detroit. The people who could afford muscles would not buy them due to lacking performance. The devastatingly low demand for muscle cars led most of the big-block cars to be discontinued by 1975. The cars that survived, like the Plymouth Road Runner, were dressed up and not built for speed. Even the pony cars left the market – by 1974, only the Camaro and Firebird remained. The Mustang had left the pony car market and evolved into a high-end compact. Through the mid 70s, the Firebird dominated the ever shrinking market because of the new, improved handling and lack of competition. Chevrolet noted Pontiac's growth in Firebird sales and reinstated the Camaro Z-28 in 1977 after a two year withdrawal from the market. Other pony cars hit the market, focusing on style rather than performance. As the 1980s approached, manufacturers grew accustomed to federal regulations. The third generation of the Mustang was released in 1979 with a new look and a V8 option. The low-torque V8 sold well and it seemed as though performance cars would become popular once more. But in the same year, America faced another gas crisis. The crisis was over in 1982 creating a demand for performance cars once again.



2004 Pontiac GTO

Evolution

With gas prices down, America was ready to be redefined as a country of speed. New technology was emerging and Detroit started producing compact cars. Engines that conformed to federal regulations accommodated small cars. The advanced technology consisted of solid-state electronics and computer integration of spark timing, air intake, and fuel injection. Muscle cars could now return because of safety, big but compliant engines, and more efficient production methods. Ford and GM began turning out redesigned pony cars. Ford was at the front of the pack with the Mustang and GM released the third-generation Camaro and Firebird. These three cars had bigger engines than their 70s precursors, but they were still relatively small. Car critics believed the Mustang was more popular because of its vintage look. As the 80s and 90s progressed, the engines grew and the cars got faster. In 1999, Camaro and Firebird even borrowed the aluminum-block V8 from the Corvette. But in 2002, the two pony cars were discontinued and only the Mustang remained.