



THE COMPLETE BOOK OF
**CLASSIC FORD
AND MERCURY
MUSCLE CARS**
1961-1973



DONALD FARR





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On the endpapers: (front) A 1979 Mach 1 Mustang with 429 Ram Air engine greets the morning; (rear) a 1969 Cougar Eliminator idles at sunset. *Jerry Heasley*

On the frontis: Technical editor Jerry Titus was the driver for *Sports Car Graphic's* test of a 1964 Cobra. Titus would soon join Shelby as a team driver. *Archives / TEN: The Enthusiast Network Magazine, LLC*

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Acknowledgments

While my nearly four-decade automotive journalism career has included stints at *Super Ford* and *Musclecar Review* magazines, I'll admit that I've mainly focused on Mustangs. No shame there, only an acknowledgement that I required much help outside the Mustang realm while writing this book, which has given me new appreciation for the car owners and enthusiasts who specialize in knowing every little detail about their favorite Ford or Mercury. Many of them responded to my pleas for information, specifications, and road-test articles, and I can't thank them enough for taking the time to respond to emails or take phone calls to supply info. So, with hope that I am remembering everyone, the best I can do is acknowledge them here: Marty Burke, Austin Craig, Mike Eaton, Bill Hamilton, George Huisman, Phil Jamieson, Rick Kirk, John Kranig, Steve and Tayna Mank, Ed Meyer, Tim Orick, Dan Parson, Bob Perkins, Barry Rabotnik, Jim Smart, and Jim Wicks. Also, Bill Barr took the time to talk with me about his work at Ford Engine Engineering, where he was involved in the development of the 428 Cobra Jet.

These days, there are clubs and registry websites for nearly every popular Ford and Mercury muscle car. While researching this book, I clicked through many of them, including the Mustang 428 Cobra Jet Registry, 429 Mustang Registry, Cougar GT-E Registry, Cougar Eliminator Registry, Boss 302 Registry, and the Shelby American Automobile Club. Some members went beyond the call of duty by responding to my numerous requests for information. They included Bob Mannel (Fairlane Club of America), Mark Reynolds (Galaxie Club of America), Kirk Dillery (Mercury Marauder Club), and Rob Day (Cyclone/Montego/Torino Registry), along with David Wagner, Chuck Beason, Dick Harrington, and Mac McCray from the Falcon Club of America. And on the rare occasion when I couldn't find what I needed at the informative Cougar Club of America website, Jim Pinkerton, Don Skinner, Bill Quay, Dave Wyrwas, Phil Parcels, and Mitch Lewis came through with information from their areas of specific model expertise.

Another invaluable website was the Old Car Manual Project at www.oldcarbrochures.com, which features sales brochures from American auto manufacturers. The Ford and Mercury brochures from the 1960s and 1970s provided many of the engine specifications, power ratings, and high-performance, model-specific, equipment listings for this book.

For perspective, each chapter lead includes an anecdote from someone who experienced Ford and Mercury muscle cars either new or almost new. Many thanks to "Animal Jim" Fuerer, Richard Adis, Ricky Ward, Herb Gordon, Richard West, and Hunt Palmer-Ball for sharing their stories.

Ford and Mercury muscle cars were produced in relatively small numbers, which certainly adds to today's interest, appeal, and collectability. Thanks to Kevin Marti at Marti Autoworks (www.martiauto.com), we have access to Ford's production data

for 1967 and later vehicles. Much of Kevin's numbers-crunching can be found at the aforementioned websites, within "Marti Reports" for individual cars, or in Kevin's Mustang and Cougar *By the Numbers* books, but he also dug a little deeper for me to pull out specific info for this book. I'm fortunate to count Kevin among the many Ford friends I've made along the way.

Another longtime pal and former co-worker from decades ago is Mike Mueller, who graciously shipped books, copied magazine articles, supplied photos, and provided contact info that contributed to this book. I'm sure the digging through files and time at the copy machine took time away from his own automotive book projects, and for that I'm deeply grateful.

When it came to photos, the ever-popular Mustangs were not a problem. Try finding photos of factory original Cougar and Cyclone muscle cars, however, produced in small numbers to begin with and most succumbing to the ravages of time and abuse. Over my career, I've crossed paths with many automotive photographers. You would not be holding this book in your hands if it weren't for photographic contributions from Dale Amy, Juan Lopez-Bonilla, Eric English, Cam Hutchins, David Newhardt, Al Rogers, and Jim Smart, along with Alex Yankovich, who provided photos from the Mecum Auction files. Just as I was starting on this project, longtime friend and ace muscle car photojournalist Tom Shaw passed away. My thanks to his family, in particular son Austin Shaw and daughter Robin Mason, for allowing me to use Tom's photography in this book. And when my photo quest for some of the rarer Ford and Mercury muscle cars came up short, I put in a call to my longtime cohort Jerry Heasley, whose, "Oh, I've got that one" responses were joy to my ears.

I was also fortunate for the opportunity to once again work with Thomas Voeringer, the archivist at The Enthusiast Network, who maintains the massive photo archives from the former Petersen Publishing magazine empire, which included *Motor Trend*, *Hot Rod*, *Car Craft*, and *Sports Car Graphic*. Thomas dug up contact sheets from the old magazine road tests so I could choose vintage photos for this book, which I felt was important to show the cars as they were delivered new.





INTRODUCTION

“There’s something about setting back into the deep bucket seats in that all-black interior basking in the soft green light from the gauges and listening to the engine noises as you glide and bump along in a tunnel of mercury vapor street lights. The chrome Hurst shift lever picks up the light from the radio dial, the tach and speedo boom out loud and clear right at you, and you feel good.”

Motor Trend’s A. B. Shuman captured the essence of the muscle car experience in his test-drive report about the 1970 Boss 302 Mustang. From Woodward Avenue to Van Nuys Boulevard to the neon-lit drive-ins in small towns all across America, young men cruised the city streets and two-lane blacktops in their 427 Galaxies, Cobra Jet Cougars, and Mach 1 Mustangs. Back then, these high-horsepower factory supercars were daily-drivers for school or the job at the local textile mill, but they were also used for Saturday night fun, either to attract girls or to challenge the 440 Plymouth at the red light. With cheap high-octane fuel available at many street corners and an emerging performance parts industry feeding the demand for even more power, muscle cars were a way of life for many hot-rodding thrill seekers in the 1960s and early 1970s.

Ford Motor Company tapped into the market with its Total Performance marketing campaign in the early 1960s, promoting racing and high-performance cars like never before. Big Galaxies and Mercury Marauders eventually gave way to smaller, lighter Fairlanes and Cyclones before the pony car craze, spawned by the Mustang, took hold to produce Super Cobra Jet Mach 1s and Boss 429s. *The Complete Book of Classic Ford & Mercury Muscle Cars: 1961–1973* documents the Blue Oval’s contributions to the exciting muscle car era.

It was a special time in American automotive history—and an exciting time for those of us who lived through it.

For 1965, the 427 was available in all Galaxies, including the 500 convertible. Dale Amy

Prepped for Performance

Throughout the muscle car era, the more powerful engines under the hood demanded heavier-duty equipment in other areas to withstand the hard-use demands expected from high-performance cars. Here are some of the components that were added to Ford and Mercury muscle cars from 1961 to 1973.

Heavy-duty suspension: Ford and Mercury used several names to describe their upgraded suspensions—Special Handling Package, Competition Suspension, Heavy-Duty Suspension, etc. In most cases, the packages included higher-rate springs, stiffer shocks, and larger front sway bar, with specifications varying depending on the engine. Larger 15-inch wheels were sometimes part of the upgrade and a rear sway bar was added to some suspensions starting in 1969.

Toploader four-speed: Ford introduced the Toploader in 1964 as a replacement for the Borg Warner T-10. Internal parts were installed through the top of the case (thus the “Toploader” description), which provided a stronger case than the earlier side-loading transmissions. Toploaders were fully synchronized except for reverse, allowing for quicker shifts and the ability to downshift with the car moving. Built in several lengths (depending on the vehicle), Toploaders came with 28- and 31-spline output shafts, with the larger diameter found in 427, 428, and 429 models.

Hurst shifter: In 1970, Ford began installing a Hurst shifter with T-handle in four-speed performance cars. It was the shifter arm only; the linkage was production Ford.

Nine-inch rear end: Big power combined with full-throttle shifting placed a lot of stress on the drivetrain, especially the rear end, and Ford had just the answer with its 9-inch rear axle, which debuted in 1957 and is today still recognized as one of the strongest rear ends of all time. It was used on nearly all high-performance Fords from 1961 to 1973 in several widths (depending on model) and with additional heavy-duty components added as torque and horsepower increased, including 31-spline axles, nodular iron differential case, and larger axle bearings. A limited-slip differential was optional, including the later Traction-Lok and Detroit Locker. Typical gear ratios for muscle cars ranged from standard 3.25 or 3.50 to optional 3.91, 4.11, or 4.30.





top: When powered by the stout R-Code 428 Cobra Jet, the 1970 Mach 1 came with additional heavy-duty components, including Competition Suspension and nine-inch rear axle, plus Hurst shifter and staggered rear shocks when equipped with four-speed.

opposite left: Ford's extra-strong nine-inch rear end was installed in most Ford and Mercury muscle cars. This one is mounted with staggered rear shocks—one in front and one behind the rear axle—as used on 1968–73 four-speed cars to reduce wheel hop during hard acceleration. *Donald Farr*

opposite right: Several 1969–71 Ford and Mercury muscle cars with four-speed used an electronic rev limiter to prevent over-revving. *Donald Farr*

Staggered rear shocks: Beginning in 1968 with the 428 Cobra Jet, Ford began employing a staggered rear shock arrangement on cars equipped with four-speed transmission. By placing one shock in front of the rear axle and one behind, axle wrap-up and the resulting wheel hop was reduced under hard acceleration. Exceptions included the 1969 Talladega, which had staggered shocks and automatic transmission, and the 1971–73 Mustangs with Competition Suspension, which were known to have staggered shocks with automatic transmission.

Rev limiter: In an attempt to reduce warranty claims, Ford added an electronic governor to a number of 1969–71 high-performance models with four-speed transmission. Designed to prevent over-revving, the rev limiter was wired into the ignition system to create a misfire at a pre-set rpm, either 5,800 (428 Cobra Jet) or 6,150 (Boss 302/429 and 429 Cobra Jet). Mounted on the inner fender, the rev limiter was wired into the distributor to coil wiring and was easily disconnected. Most were removed and thrown away.

Four-bolt mains: Ford V-8 engines secured their five main bearing caps with two bolts, which was sufficient for normal driving conditions. However, muscle cars weren't driven normally, typically experiencing high rpms and speed-shifting, so their main bearings were often strengthened with two extra bolts. Most 427s utilized cross-bolted mains, while later engines, notably the Boss 302/351 and some four-barrel 351 Cleavelands, received extra bolts on the middle three or all five main bearing caps.





CHAPTER ONE

THE BIG BODIES

1961 - 1970

In February 1963, Jim Feurer was 22 years old and bringing home good money from his job in Chicago with Western Electric. An admitted “gear head” with a penchant for fast cars, Feurer placed an order for a 409 Chevy but canceled it when delivery was delayed. A subsequent deal for a Max Wedge Dodge fell through when the dealer wouldn’t accept Feurer’s trade-in. Then a friend who worked at the local Ford dealership called. “He had just heard about the 427 for the Monterey,” Feurer recalls. “I ordered it that day, a black two-door sedan with Super Marauder 427 and 4.11 gears.” Feurer took delivery on March 23 and immediately started street racing. He lost only once with his 427 Merc—to a 427 Galaxie, he said. When a friend noted that the big Monterey launched “like an animal,” Feurer gained a nickname. Throughout his future drag racing career, he was known as “Animal Jim.”

At the beginning of the muscle car decade, the 1961 Starliner with the 401-horsepower 6V Thunderbird Special was the hot setup. *Jerry Heasley*

Feurer was typical of the early 1960s speed addict. Single, carefree, and flush with disposable income, young men like Feuerer craved the big-engine, big-body cars from Detroit. Technically, the term “muscle car” wasn’t coined until Pontiac dropped a 389 into the midsize 1964 Tempest and called it the GTO. But if the description had been used earlier, it surely would have described the brawny 1961–64 full-bodied Fords and Mercurys with high-performance 390, 406, and 427 engines. Although big in size and heavy in weight, the 400-horsepower ratings satisfied the cravings for tire-squealing acceleration and adrenaline-inducing top speeds.

The 360-horsepower 352 High Performance engine for 1960 lit the fuse. For the next four years, big Fords with solid-lifter 390s, six-barrel 406s, and dual-quad 427s exploded onto the American performance car scene with ever-increasing displacement and horsepower, all the way to 425 by 1963. Ford was also locking horns with General Motors and Chrysler in NASCAR and professional drag racing, which resulted in a “Win on Sunday, sell on Monday” mentality and the company no longer participating in the Automobile Manufacturers Association’s (AMA) racing ban. To keep things from getting out of hand, sanctioning bodies established a homologation rule that mandated a certain number of engines and cars must be produced for sale through dealerships. In 1962, Ford’s marketing slogan transitioned from “Extra Lively” to an all-out “Total Performance” assault.

It was the perfect storm for young men like Jim Feuerer.

1961 Galaxie Solid-Lifter 390

Hot Rod called it “Ford’s Hot Stocker.” In the December 1960 issue, editor Ray Brock glossed over Ford’s styling updates for the 1961 Fords and headed straight for the meat—the 375-horsepower 390 Thunderbird Super V-8. “More displacement and increased horsepower promises to make Ford enthusiasts happy,” he predicted.

In 1960, Ford wet the whistle for race and driving enthusiasts with the solid-lifter 352, rated at 360 horsepower. For 1961, Ford expanded the 352’s bore and stroke to create the 390 Thunderbird Special, a primarily passenger-car engine with 300 horsepower. By November 1960, Ford had unleashed the Thunderbird Super 390 with 375 horsepower as the replacement for 1960’s solid-lifter 352. As Brock pointed out in *Hot Rod*, the high-performance 390 was much different than the mundane passenger-car version, using a stronger block, specially selected pistons, smaller combustion chambers for a 10.6:1 compression ratio, high-lift cam with solid lifters, dual-point distributor, free-flowing cast-iron headers, and an aluminum intake manifold with a Holley four-barrel. While visiting Dearborn, Michigan, to preview the 1961 Fords, Brock reported that a hardtop equipped with the 375-horse 390 had topped 159 miles per hour on Ford’s test track.

Impressive—until Ford added another late addition to the engine lineup. The 6V Thunderbird Special had essentially the same solid-lifter powerplant as the Thunderbird Super 390 but with an aluminum intake that mounted a trio of Holley



above: Jim Feuerer was proud as a new poppa when he came home with a brand-new 427-powered 1963 Monterey sedan with “breezeway” rear window. *Jim Feuerer*

opposite top: Ford’s high-performance 390s were the ideal powerplants for the 1961 Galaxie Starliner, a two-door with a sporty fastback roofline. *Jerry Heasley*

opposite left: In 1960, Ford’s 352 High Performance was rated at 360 horsepower thanks to its solid-lifter drivetrain, header-style exhaust manifolds, and a Holley four-barrel on an aluminum intake. It would mark the beginning of a three-year displacement and horsepower spurt for the FE engine. *Donald Farr*

opposite right: When equipped with six-barrel Holley carburetion, either from the factory or installed by the dealer, the horsepower rating for the solid-lifter 390 jumped to 401. *Jerry Heasley*



two-barrel carburetors. Rated at 401 horsepower and available in early 1961, the 6V 390 was Ford's first factory engine rated at more than 400 horsepower. The timing was critical; Ford wanted to make sure the 401 horses were legal for January's NHRA Winternationals. Many of the units were supplied in the trunk for dealer installation, but a few full-size Fords rolled off the assembly line with the six-barrel induction.

The Thunderbird Super 390 and 6V Thunderbird Special were offered only with the three-speed manual transmission, with or without overdrive, although a Borg-Warner four-speed became available late in the model year. Both 390s were complete performance packages; cars so equipped got heavy-duty springs and shocks, a larger 3/8-inch fuel line, wider station wagon front drum brakes, 15-inch wheels, a larger diameter driveshaft, and a four-pinion differential with 3.89:1 gear ratio for the three-speeds or 4.10:1 for overdrive. Power brakes and steering were not available.

1962 Galaxie 406 6V

Ford ended 1961 on a performance high note with 375- and 401-horsepower versions of the solid-lifter 390 for full-size Fords. The two engines continued into the 1962 model year but with new names—390 High Performance and 390 Super High Performance. However, both would be discontinued around January 1962. And for good reason—Ford had a couple of tricks up its sleeve for midyear 1962 introduction.

The FE: Displacement and Power

With passenger cars growing larger and heavier in the late 1950s, combined with the public's growing thirst for racing and performance, Ford needed a larger displacement companion for the Y-block, introduced in 1954 with 239 cubic inches and maxed out at 312 cubic inches by 1956. Coinciding with the introduction of the 1958 Edsel, Ford introduced a new engine, also based on the Y-block's strong design with the skirt extending below the crankshaft centerline but with the capacity for a larger bore. Ford identified the powerplant as the "Interceptor" and, the following year, as the "Thunderbird Special," but it became better known by its internal code name—FE, for "Ford Edsel."

The FE debuted in 1958 with a 4.00-inch bore and 3.30-inch stroke to create a 332-cubic-inch engine with either two- or four-barrel induction. A 352-cubic-inch Interceptor Special with 3.50-inch bore was also available for the Fairlane 500 and station wagons. The FE was exclusive in the new Edsel as either 361 or 410 cubic inches. The FE's more than 400-cubic-inch potential would prove beneficial in the coming years.

As a newer design, the FE also incorporated a number of improvements over the earlier Y-block, including easier serviceability, wider bore spacing, a lighter valvetrain, and larger intake ports. In the late 1960s, the FE big-block would serve as Ford's workman-like engine, not only for trucks and four-door family sedans but also for performance duty as displacement increased from 352 to 390, 406, 427, and 428. From six-barrel 406s and dual-quad 427s to the later 428 Cobra Jet, from numerous NASCAR victories to victory lane at LeMans, the FE engine would serve as the big-inch foundation for Ford's Total Performance commitment.