

Chevrolet Corvette History

<http://www.edmunds.com/chevrolet/corvette/history/>

Entering the 1950s, no corporation even came close to General Motors in its size, the scope of its enterprise or its profits. GM was twice as big as the second biggest company in the world, Standard Oil of New Jersey (forefather of today's ExxonMobil), and had a vast conglomeration of businesses ranging from home appliances to providing insurance and building Buicks, Cadillacs, Chevrolets, GMCs, Oldsmobiles, Pontiacs and locomotives. It was so big that it made more than half the cars sold in the United States and the U.S. Department of Justice's antitrust division was threatening to break it up. In the diversified 21st century, it's almost hard to imagine how overwhelmingly concentrated corporate power was in GM back then.

But it didn't make a sports car. The idea of a car coming from stodgy GM that could compete with Jaguar, MG or Triumph was almost absurd.

Still, there was room inside GM for dreams even if there wasn't any room for whimsy. Harley J. Earl, GM's chief designer (formally the head of the Art and Color Section) and the man who invented the "concept car" with the 1938 Buick Y-Job, was in charge of the corporation's ambitious musings. In the fall of 1951, Earl began ruminating about an open sports car that would sell for around the price of a mainstream American sedan: about \$2,000. His ideas were rather nebulous, but he handed those notions over to Robert F. McLean, the concept came into focus and a car based upon that emerged.

Determined to keep costs down, McLean used off-the-shelf Chevy mechanical components. The chassis and suspension were for all intents and purposes the 1952 Chevy sedan's, with the drivetrain and passenger compartment shoved rearward to achieve a 53/47 front-to-rear weight distribution over its 102-inch wheelbase. The engine was essentially the same dumpy inline-6 that powered all Chevys but with a higher compression ratio, triple Carter side-draft carbs and a more aggressive cam that hauled its output up to 150 horsepower. Fearful that no Chevy manual three-speed transmission could handle such extreme power (there were no four-speeds in GM's inventory), a two-speed Powerglide automatic was bolted behind the hoary six. And to keep tooling costs in line, the body was made out of fiberglass instead of steel.

While the car was conceived with rigorous attention to the bottom line and production feasibility in mind, it was still only intended to be part of GM's Motorama exhibit at the 1953 New York Auto Show. That is until Ed Cole, Chevy's recently appointed chief engineer, saw it. Cole, then immersed

in development of the world-changing 1955 "small-block" V8, is said to have literally jumped up and down with enthusiasm for the Motorama car. So before it even got to New York, and after some corporate machinations, the engineering to put it into production began.

But first Cole needed to name it. So he called Myron Scott, founder of the All-American Soap Box Derby and an assistant advertising manager for Chevrolet, into a special meeting of executives researching the name. Scott suggested "Corvette," Cole loved it and the rest is history.

The public at the New York show loved the 1953 Motorama Corvette almost as much as Cole did. Thousands of potential buyers wanted to know when they could buy one. Just six months later, they could. The **1953** Corvette, virtually identical to the Motorama prototype, entered production on June 30, 1953, in Flint, Michigan.

GM has been making them ever since.

C1: Solid-Axle Corvettes (1953-'62)

The **1953** Corvette was undeniably gorgeous and, with its fiberglass body, somewhat innovative, but as a sports car it was pathetic. The chassis handled better with the 'Vette's improved weight distribution, but it was still pretty much a '52 Chevy sedan suspension down there. That meant the front end was suspended by a primitive independent system and the rear held up with leaf springs. A quicker steering gear gave some reflexes to the car, but quicker isn't the same as quick. And of course, the 150-hp, 235-cubic-inch six and two-speed automatic Powerglide transmission were far less than athletic.

It wasn't cheap either. At \$3,498 the '53 Corvette sticker ran almost 75 percent more than Earl had initially hoped, \$1,225 more expensive than the second most expensive '53 Chevrolet, the eight-passenger Deluxe 210 four-door station wagon, and \$272 more expensive than two Special 150 two-door sedans, then the division's cheapest car. For comparison's sake, the least expensive 2014 Corvette, at \$51,995, costs more than four \$12,995 Spark hatchbacks.

Motor Trend tested one of the first Chevrolet Corvettes and found it traipsing from zero to 60 mph in a lackadaisical 11.5 seconds. But the publication was not completely unimpressed with the car. "Probably one of the biggest surprises I got with the car was when I took it through some sharp corners at fairly good speeds," its writer reported. "I'd heard that Chevrolet had designed the suspension so that it would stay flat and stick in corners, but I took it with several grains of salt. It sticks better than some foreign sports cars I've driven."

The late start and makeshift nature of the Corvette's Flint, Michigan, assembly line meant that only 300 Polo White examples were built of the '53 before it was time to introduce the **1954** model. Not surprisingly, the '54 (now produced in an old millwork building in St. Louis) barely changed from the '53 with the notable exception that it could now be ordered in Pennant Blue, Sportsman Red and black in addition to Polo White. A total of 3,640 were built this model year, and many wound up casting their shadows across Chevy dealers' lots for months — even years — waiting for buyers. As good-looking as the Corvette was, unless it had performance to match its appearance, buyers weren't that interested in it.

The year **1955** brought the single most important development in the history of the Corvette: Chevrolet's brilliant small-block V8. Originally displacing 265 cubic inches, the first small-block was rated at 195 hp in the otherwise almost unchanged '55 Corvette (the most notable tweak was the oversize "V" in the lettering along the front fenders). Still saddled with the Powerglide transmission, performance was still less than scintillating (Road & Track had a '55 getting to 60 mph in 8.5 seconds), but the potential was obvious. With many '54 Corvettes still clogging dealer lots, GM restricted production of the '55 model to just 700 cars, with all but maybe a half dozen of them being powered by the new V8.

It was the **1956** Corvette that established the two-seater as a legitimate performance machine and as an American icon. While the chassis was very much a carryover from previous Corvettes, the '56's new body was simply gorgeous, from the chrome teeth filling its mouth down along its scalloped flanks and back to its round rump of a trunk. Inside, the cockpit was styled like, well, a cockpit, with the bucket seats surrounded by a body-colored frame that divided the passenger space. A removable hardtop was offered as an option for the first time. To many, the '56 and barely changed '57 remain the most beautiful Corvettes of all time.

As lovely as the '56 Corvette was (and still is) what really ignited the legend that year was that GM began racing it. The only engine offered in the '56 Corvette was the 265-cubic-inch V8, now rated at 210 hp and it could be backed, for the first time, by a three-speed manual transmission. That was a solid enough start for Zora Arkus-Duntov, now the Corvette's chief engineer, to begin going fast.

At Florida's Daytona Speedweeks in February 1956, Arkus-Duntov appeared with new 'Vettes for John Fitch and Betty Skelton. Reworked cylinder heads, a compression ratio increase to 10.3 to 1, and a few other emerging speed parts for the small-block had the V8s making 255 hp. Fitch's '56 went 145.5 mph and Skelton sped past at 137.8 mph. During that same competition, the best a Ford Thunderbird could do was just 134.404 mph.

After the Speedweeks experience came even more Corvettes for that year's 12 Hours of Sebring and then the more exuberantly styled SR-2 racer. And with the racing came a change in Corvette advertising that now heralded the car's performance and competition credentials. In a real way, the 1953-'55 Corvettes were only foreshadows of the "real" Corvette that arrived in '56.

Visually, the **1957** edition was virtually identical to the '56, but inside, a four-speed manual transmission (the great T-10) was available for the first time. The standard Corvette engine grew to 283 cubic inches and 220 hp, breathing through a single four-barrel carburetor. Best of all, for the first time, Chevrolet offered performance-upgraded engines as options. In addition to the base configuration, the 283 could be had with dual-quad carbs rated at either 245 or 270 hp or, best of all, with Rochester mechanical fuel injection.

Fuel injection on top of the 283 increased its output to either 250 or 283 hp: 1 hp per cubic inch. The top engine probably made more than that, but the ad agency loved that one-cube/one-pony hook. Suddenly, the Corvette was one of the world's truly quick cars and it drove beautifully. "The function of the fuel injection system was notable," wrote Motor Trend's Walt Woron at the time. "Starts were quick. Pumping the throttle didn't pump raw gas to the cylinders, so you can't flood it. Throttle response is instantaneous. No maneuver could flood or starve the engine (and I tried with violent cornering and hard braking)." Road & Track had one '57 "Fuelie" catapulting to 60 mph in just 5.7 seconds. Still, though Chevy built 6,339 Corvettes during the '57 model year, only 1,040 of them had the fuel-injected engine.

Both the interior and exterior of the Chevrolet Corvette were significantly restyled for **1958**.

Dual headlights, simulated hood louvers, a full mine's worth of chrome and needless side scoops marred the '58's exterior appearance. Inside, the cockpit theme was even more exaggerated than before with a grab bar in front of the passenger instead of instrumentation. The interior was actually pretty good, but the exterior was just overdone.

Again, the engine bay could be filled with any one of four different variations on the 283 small-block. At the base was the single four-barrel version now making 230 hp, dual-quad versions were rated at 245 and 270 hp and the fuelie engines now made either 250 or 290 hp.

Garish or not, the '58 Corvette was a hit and Chevy built 9,168 examples. For the first time, say some sources, GM made a profit with the Corvette.

Cleaning off some of the chrome excess (and those hideous fake hood louvers) resulted in the much cleaner-looking **1959** Corvette, but the car was very much a carryover otherwise. Chevy put a full 9,670 of the '59 Corvettes on the road.

The **1960** Corvette didn't look much different from the '59, but the rated outputs of the fuel-injected versions grew to 275 and a full 315 hp. A rear stabilizer bar helped tame the solid rear axle a bit, and for the first time more than 10,000 Corvettes were built.

A new, toothless front grille announced the **1961** Corvette when it approached, and a new "duck tail" rear end let everyone know it was new as it departed. But except for the styling update (the rear part of which forecast changes to come for '63), the '61 carried over almost unchanged from '60. It was the last year for that '50s favorite, wide whitewall tires, on the options list and the first for one rare option, the 24-gallon oversize fuel tank.

Big news came in the form of a big engine for **1962** as the small-block V8 grew to 327 cubic inches. The base four-barrel engine now knocked out 250 hp, with higher-output versions available in 300- and 340-hp versions. The dual-quad option was dropped, but the fuel injection system was back and it was now rated at a thrilling 360 hp.

There's a subset of Corvette enthusiasts who claim the '62 (with its blacked-out grille and new rocker panel molding) to be the greatest Corvette ever. It was certainly the best of the first-generation, solid-rear-axle Corvettes — but the chassis was still closely related to the '52 Chevy sedan. A new Corvette was overdue.

C2: The Sting Ray (1963-'67)

Five decades after its introduction, the **1963** Corvette remains one of the most startling, engrossing and completely thrilling automotive designs of all time. For discerning enthusiasts, the 1963-'67 Corvettes are the most compelling of the series.

The "midyear" Corvettes aren't so much beautiful as they are provocative. And it was Harley Earl's successor as GM design chief, Bill Mitchell, who was doing most of the provoking. Back in the late '50s, Mitchell had acquired one of the old SS chassis that had been built to race at Sebring and, working with his assistant Larry Shinoda, designed a new body for it with a high waistline, a chiseled prow and sharply creased fenders and called it the Sting Ray.

At about the same time that Mitchell and Shinoda were conjuring up the Sting Ray body style, Corvette Chief Engineer Zora Arkus-Duntov was building what he hoped would be a world-class chassis for his beloved charge. Cutting the wheelbase down by 4 inches to 98, Arkus-Duntov built a ladder frame that was much stiffer than the previous X-member design and allowed the passenger compartment to be sunk down between the rails. He also designed a new independent rear suspension that economically (in both dollar cost and space usage) used a single transverse nine-leaf spring and the half-shafts as part of the linkage.

It was the marriage of the Mitchell/Shinoda body design with the new Arkus-Duntov chassis that resulted in the 1963 Corvette roadster and, for the first time, fastback coupe.

From the rotating hidden headlamps across the front to the boattail-shaped rear window, the '63 Corvette coupe was outrageously attractive. And with a thick center bar splitting the rear window in two, not a car out of which it was particularly easy to see. That design earned this car the nickname "split-window coupe."

However, the '63 is the most cluttered of the Sting Rays, with phony vent grilles in the hood, nonfunctional gills in the front fenders, ribbed rocker moldings and that bar bisecting the rear window.

What carried over from the 1962 to the '63 Corvette were most of the engines (all of which still displaced 327 cubic inches), the four-wheel drum brakes and the general styling of the rear quarters. A three-speed manual was still the standard transmission, and the base 327 V8 was still rated at 250 hp. On the options sheet were 300- and 340-hp four-barrel, and 360-hp fuel-injected versions of the 327. Also available was the legendary "Z06" race pack option for the coupe that included such things as metallic brake pads, a heavy-duty suspension and an oversize fuel tank. Ordering the Z06 required the costly fuel-injected engine, so production was limited.

Motor Trend tested a '63 Corvette powered by the fuel-injected engine and backed by the Muncie four-speed transmission. The 'Vette hustled from zero to 60 mph in 5.8 seconds and consumed the quarter-mile in 14.5 seconds at 102 mph. "We thought the old model cornered darn well," wrote the magazine, "but there's no comparing it to this new one. It does take a little different technique, but once the driver gets onto it, it's beautiful."

The public fell in love with the Sting Ray, buying 10,594 coupes and 10,919 convertibles. That's almost half again as many '62 'Vettes were sold, and the first time total sales topped 20,000 in a year.

For **1964** the Sting Ray's styling was cleaned up but the car otherwise mostly carried over from '63. Eliminating the dummy hood vents, restyling the roof vents and taking the center bar out of the rear window to drastically improve visibility made the true glory of the Sting Ray's shape more obvious. New to the options list was a 360-hp four-barrel 327, and the fuelie motor was now rated at a stout 375 hp.

Visually, the easiest way to tell a **1965** Corvette from a '64 is the three functional vertical louvers in each front fender. But the big news (literally) was the availability of the new 396-cubic-inch big-block V8. And there was even better news, as four-wheel disc brakes became standard (though 316 fools did delete them in favor of drums and a \$64.50 credit).

The "L78" 396 grunted out a hulking 425 hp and became an instant legend as the meanest machine to leave General Motors since the company had stopped building Sherman tanks. With the arrival of big-block power, the mechanical fuel-injected 327's days were numbered. 1965 would be its last year.

But the 396 lasted only one year in the Corvette as it was superseded by 427-cubic-inch versions of the big-block V8 for **1966**. Behind the new egg-crate grille, buyers could opt for the standard 327, which was now rated at 300 hp, a 350-horse version inhaling through a single four-barrel, the "L39" 427 making 390 hp or the overwhelming "L72" 427 rated at 425 hp (the same as '65's 396, but with a less temperamental personality).

For **1967** the louver count on each front fender went up to five and the parking brake moved from under the dash to between the bucket seats. But the real glory of the '67 came with the regal "L88" 427, which used aluminum cylinder heads and an intimidating 12.5:1 compression ratio to make somewhere north of 500 hp while wearing a huge 850-cfm four-barrel carburetor (though Chevy would, disingenuously, only admit to 430 horses). The L88 option carried an astronomical \$947.90 price tag, and ordering it automatically eliminated the heater, radio and fan shroud. The intent was obviously racing and only 20 L88s were ever built. Today they are the most desirable of the first Sting Rays.

Also new to the Corvette option charts was an "L68" 427 rated at 400 hp and the L71 427 rated at 435 hp and featuring three two-barrel carburetors ("tri-power").

In every conceivable way, the Corvette was at its peak in '67. But, for no apparent reason, it was redesigned for '68 anyhow.

C3: The Mako Shark (1968-'82)

Based on the Mako Shark II showcar designed by Larry Shinoda and displayed during 1965, the third-generation Corvette's styling was flamboyant in its overall shape but restrained in its details. The fenders seemed almost to burst over the tires, but there were no phony scoops or extraneous chrome details anywhere on the car. The nose seemed to almost be plowing into the ground and used pop-up headlights to keep things sleek. There was a slight kick-up to the car's tail that was at least a bit reminiscent of Chaparral Can-Am racecars.

This generation of Corvettes has never been as beloved as the second generation, but it's still a car that commands attention wherever it goes. "Getting emotionally 'hung up' on the Corvette's styling takes somewhat longer than becoming enthused over its great driving characteristics," wrote Motor Trend, "but not much."

Again there were coupe and convertible Corvettes offered for **1968**. The convertible again stowed its top under a hinged hard cover, while the coupe featured swooping buttresses on either side of a tunneled-in rear window. The most unique elements of the coupe, though, were the two removable roof panels: the first "T-tops."

Despite the all-new body, the chassis and drivetrains were all familiar. The wheelbase was still 98 inches and the standard engine was still a 300-hp 327 small-block V8 topped by a four-barrel carburetor. The optional engines included a 350-hp 327 and all the big-block 427s from '67, including the awesome L88.

Though it replaced a beloved icon, the "Mako Shark" 'Vette proved a hit during the '68 model year, with Chevy selling 9,936 coupes (starting price \$4,663) and 18,630 convertibles (starting at \$4,347). That was yet another record, and it was accomplished despite calamitously bad quality control.

For **1969**, the Sting Ray name returned, though now spelled out on the fenders as one word, "Stingray" in chrome script, and the quality of assembly improved markedly. Minor changes included moving the ignition key to the steering wheel and incorporating the back-up lights into the taillights. The most significant mechanical change was the replacement of the 327-cubic-inch small-block V8s with new 350-cubic-inch versions. As with the 327s, the 350s were rated at 300 hp in base form and 350 hp in the optional "L46." The 427s also returned in force, carrying the same power ratings as '68's.

There was, however, one earth-shattering addition to the line: the ZL-1. The ZL-1 engine was basically an L88 427 big-block V8 done up in all-aluminum construction, which made it 20-25 pounds lighter than a small-block. Intended for road racing and equipped accordingly, only two of the 585-hp ZL-1s were produced. Motor Trend got to drive one of them.

"The ZL-1 has Ferrari speed plus," Eric Dahlquist, then the magazine's editor, wrote. "Ferrari handling and Ferrari brakes but without Ferrari fuss and bother so you can enjoy it, the car, more. Therefore, even without the super Ferrari leather interior and Ferrari coachwork, it is still better than a Ferrari in its own right because there is no distraction and everything in perspective, aluminum engine, fiberglass body and all, the ZL-1 is nearer a Chaparral 2G for the street.... The ZL-1 doesn't just accelerate because the word 'accelerate' is inadequate for this car. It tears its way through the air and across black pavement like all the modern big-inch racing machines you have ever seen, the engine climbing the rev band in that kind of leaping gait as the tires hunt for traction, find it, lose it again for a millisecond, then find it until they are locked in."

The four vertical side vents on each front fender of the 1968 and '69 'Vettes gave way to a new crosshatch pattern for the **1970** model, and amber front signal lights and square exhaust outlets also appeared. And finally a four-speed manual transmission was made standard equipment, replacing the desperately lame three-speed no one was buying anyhow.

The engine lineup for '70 was also revised with a new, thoroughly friendly 370-hp "LT-1" 350 joining the lineup and all the 427s departing in favor of two new 454-cubic-inch big-block V8s: a 390-hp "LS5" wearing a four-barrel carburetor and a tri-power-equipped "LS7" making a claimed 460 hp. However, the LS7 carried a \$3,000 option price and there's no record of any having been built. It would be a long while before Corvettes would be so powerful again.

With stricter emissions controls in force, the compression ratios on all Corvette engines dropped for **1971**. The base 350 now plugged along with 270 hp, the LT-1 350 dropped to 330 hp and the detuned LS5 454 now made a mere 365 hp. Gone was the LS7 454 and in its place was an "LS6" 454 four-barrel V8 rated at 425 hp. Those are still heady numbers, but the diminution of Corvette performance would continue throughout the rest of the decade. Except for the power losses, the '71 was essentially the same as the '70.

The power drain would continue for **1972** and was exaggerated by a switch from SAE gross to SAE net power ratings. So the base 350 now carried a measly 200-hp rating, the LT1 made just 255 hp,

and the sole big-block, an LS5 454, could only muster 270 hp. About 30 '72 Corvettes were powered by a special "ZR-1" version of the LT-1 350 as part of a club-racing package.

A body-colored rubberized front bumper took up residence on the **1973** Corvette, replacing the chrome strip used previously. Furthermore, the side vents were now single, almost vertical, openings and radial tires were standard for the first time. Power dropped again, with the base 350 now rated at 190 hp and a new optional "L-82" 350 making 250 hp. The sole 454 was an "LS4" rated at 275 hp.

The '73 Corvette's rubber nose was paired with a matching wedge-shaped, body-colored tail on the **1974** Corvette as designers elegantly coped with new bumper regulations. There was some more jiggling of power ratings on the engines, but the big news was that this would be the last year for the big-block V8.

Ordering a **1975** Corvette was simplified down to two engine choices: the base 350 V8 making a hideous 165 hp or the L82 making 205 hp, with both exhaling through a catalytic converter. A modification to the bumper system meant the '75 Corvette's rear bumper cover was now a one-piece molding, unlike the '74's that had an unsightly seam down its center. But the Corvette was still amazingly popular, with Chevy selling 33,836 coupes and 4,629 convertibles during the '75 model year.

Chevy sold exactly zero **1976** Corvette convertibles by simply stopping production. The base "L48" 350 was now rated at 180 hp as engineers were beginning to grasp the intricacies of emissions regulations, and the L82 350 jumped to 210 hp. Both engines breathed in through four-barrel carburetors.

Inside, the '76 Corvette got a new four-spoke steering wheel similar to that used on the Vega and Camaro (a wheel that was instantly despised by most enthusiasts) and the dash was now grained with "stitching" molded in.

The Stingray lettering was excised from the **1977** Corvette's fenders and steel reinforcements were added to the hood, but otherwise the car was a carryover from '76.

To celebrate the Corvette's first quarter-century, the **1978** model's tail was redesigned with a huge wraparound rear window replacing the buttresses that had long been one of the coupe's signature design elements. However, while the large window did increase luggage capacity, it didn't open, so loading was still a matter of working around the seats. The interior was comprehensively tweaked

and that included new instrumentation, a lockable glovebox and the relocation of windshield wiper controls to a stalk on the steering column.

The base L48 350 was now rated at 185 hp and a new dual-snorkel intake bumped output of the L82 version to 220 hp. The standard transmission was still a four-speed manual, with a three-speed automatic optional.

Two special-edition models became instant collectibles during the '78 model year. The first was a "Silver Anniversary" edition that featured a two-tone silver-on-top/charcoal-on-bottom paint job, and the second was the iconic black-on-top/silver-on-bottom limited-edition Indy Pace Car that also featured a deep chin spoiler and ducktail rear spoiler. This was the first time a Corvette had paced the May classic and buyers snatched up the pace cars. Many pace cars wound up going directly into storage, and ultralow-mileage examples still regularly show up at auctions and on eBay. However, the pace cars aren't particularly rare, as Chevy wound up making about 6,500 of them.

Though it was hardly the quickest Corvette ever, the '78 was tremendously popular, with Chevy building 40,725 of them: the first time the company had sold more than 40,000 units.

On the outside, changes to the **1979** Corvette were indiscernible. A dual-snorkel air cleaner now fed the L48 350, boosting output to 195 hp. The L82 was treated to a new cam, larger valves, a higher compression ratio and a more efficient exhaust system, which all combined to push the engine to 225 hp. For some inexplicable reason, production jumped to 53,807 during the model year (yet another record) and the Corvette's first production push beyond 50K.

An extensive design updating and weight reduction program had the **1980** Corvette looking more angular and weighing in about 250 pounds lighter. In every state but California, the base L48 350 now made 190 hp and the L82 was rated at 230. Both were available with either manual or automatic transmissions.

Californians, however, were stuck with only a 305-cubic-inch V8 making 180 hp that was lashed to a mandatory three-speed automatic transmission. Sales of the '80 Corvette slumped to 40,506 units.

What changed about the **1981** Corvette was the adoption of a new, much lighter fiberglass transverse rear leaf spring and a new, 190-hp "L81" version of the 350 V8 that was the only engine available. For most of the country, the L81 was no great shakes, but it was a definite step forward for California. In June of that year, Corvette production moved from St. Louis to a brand-new facility in Bowling Green, Kentucky.

Manual transmissions were banished from the **1982** Corvette, all of which were equipped with a four-speed automatic transmission for this year. Also, back after a 17-year absence was fuel injection, this time an electronic throttle body system known as "Cross-Fire" injection. The injection system boosted output of the L81 350 to 200 hp with much better drivability.

Also offered during '82 was the "Collector Edition" Corvette that featured silver-beige paint, special graphics, multivaned wheels, bronze-colored glass roof panels and a rear glass window that opened hydraulically for easier storage access.

With sales down to 25,407 units for the '82 model year, it was obvious the "Mako Shark" 'Vettes had exhausted their welcome — finally.

C4: Scientific Corvettes (1984-'96)

Hey, what happened to 1983? What happened was that the change from the previous-generation Corvette to the new one was so radical that it took a while to get the Bowling Green plant up and running. So while 43 preproduction "1983" C4 Corvettes were built, none of these was ever sold to the general public and only one of them survives today. Instead, in March of '83, Chevrolet began selling the **1984** Corvette and it was the most dramatically different Corvette since the '63 Sting Ray.

This new machine rode on a 96.2-inch wheelbase, used simply gorgeous cast aluminum suspension components and featured a larger interior with fully digital instrumentation that looked as if it had been ripped off a Star Trek movie set. One of the particularly cheesy and unconvincing Star Trek movie sets.

Gone were the old coupe's T-tops in favor of a single fiberglass section that could be removed using a wrench, but many of the C3 styling themes continued, though more conservatively expressed. The hideaway headlights were now single square units on rotating mounts, and the hood itself was a giant clamshell piece that made access to the engine easy but appalled insurance companies that had to cover its enormous replacement cost.

Everything mechanical about the C4 Corvette was significantly better than before. The new suspension system used composite transverse leaf springs both fore and aft, the steering was by rack-and-pinion for the first time, the brakes were oversized discs, the frame itself featured a large aluminum C-section beam that made for a stiffer structure and the tires were enormous (for the time) Goodyear P255/50VR16 unidirectional "Gatorbacks" on 16-inch wheels. About the only thing that

carried over was the small-block 350 V8, again equipped with Cross-Fire throttle-body fuel injection and now rated at 205 hp.

At the beginning of the 1984 model run, the only transmission available was the 700R4 four-speed automatic, but by January of 1984 a new Doug Nash "4+3" manual transmission was offered that featured an electronically engaged overdrive on the top three gears. Although intriguing, it was a balky and completely crummy excuse for a transmission.

The major criticisms of the '84 Corvette were its incredibly stiff ride, particularly when equipped with the Z51 performance suspension package, the still-lackluster engine and the obnoxious dash graphics. Despite that, however, the '84 Corvette quickly established itself as the dominant car in showroom stock racing and Chevrolet sold a stunning 53,877 of them during the extended model year.

Messing with success where needed, the Corvette was treated to the new Tuned Port Injected (TPI) version of the 350-cubic-inch (now more commonly referred to as a 5.7-liter) small-block for **1985**. This vastly more efficient induction system bumped output of the V8 to 230 hp with a thick and friendly torque curve. The better "L98" engine was combined with a retuned, more comfortable suspension to produce a significantly better Corvette than the previous year.

A convertible returned to the Corvette lineup for **1986** and a bright yellow version was used to pace that year's Indianapolis 500: the second time a Corvette had had the honor. Another significant advance was the fitment of Bosch antilock brakes for the first time, making for a safer everyday machine. Every Corvette coupe also got a third brake light over its rear hatch, while the convertible's was integrated into the rear fascia. Chevy sold 27,794 '86 Corvette coupes and 7,315 convertibles.

The fitment of hydraulic roller lifters to the L98's valvetrain boosted its output to 240 hp for **1987**, but the car was virtually unchanged otherwise. Two interesting additions to the options list were a new Z-52 suspension system for higher performance without the complete sacrifice of comfort, and new electronic tire-pressure monitors.

New 17-inch wheels inside P275/40ZR17 tires were added to the **1988** Corvette options list, while new aluminum cylinder heads and a revised camshaft boosted the L98 to 245 hp with even better torque characteristics. This was also the last year Chevy would foist the dreadful 4+3 transmission off as the shift-it-yourself choice. A 35th anniversary model, done in a white-on-white scheme, marked this milestone.

The new manual transmission for **1989** was a ZF six-speed that was a joy to shift as long as you didn't mind using some muscle. And as long as you didn't resent the "skip shift" feature that forced a shift from 1st to 4th gear under part-throttle conditions to improve fuel economy. Other changes to the lineup included a new FX3 selective ride control system for the Z51-equipped coupes and a new optional fiberglass hardtop for the convertible. Every enthusiast knew, however, that much bigger, much brawnier news was coming to the Corvette for 1990.

That big news was, of course, the **1990** Corvette ZR-1 coupe (the ZR-1 was never available as a convertible). Nicknamed "King of the Hill," the ZR-1 was built around the Lotus-designed, Mercury Marine-built, all-aluminum 5.7-liter DOHC 32-valve LT5 V8 making an astounding 375 hp. That is, it made 375 hp when an in-dash key was set in "full-power" mode and not in the "valet" mode, where it was limited to just 250 hp. The only transmission available in the ZR-1 was the ZF six-speed and inside its swollen rear fenders were humongous P315/35ZR17 tires on suitably wide wheels.

The widened rear fenders on the ZR-1 were capped by a new rear fascia distinguished by squared-off taillights and convex (as opposed to the usually concave) rear fascia.

In testing a preproduction ZR-1, Motor Trend concluded that, "With a top speed in the neighborhood of 175 mph, a 0-60-mph time of 4.71 seconds and 13.13-second/110.0-mph quarter-mile, no one's going to accuse the DOHC 'Vette of being limp-wristed." They were right, no one dared call the limited-production ZR-1 limp-wristed, but it was criticized for its incredible \$58,995 price: nearly twice that of a regular L98-powered Corvette.

All the '90 Corvettes got a new dashboard with a vastly improved mixture of analog and digital instrumentation, better ventilation, better sound systems and an airbag for the driver. Otherwise, the Corvette was very much status quo.

Restyling came to the Chevrolet Corvette for **1991** with a slicker front end incorporating wraparound foglights, a new rear fascia reminiscent of the ZR-1's that incorporated the third brake light (the latter would remain on the hatch of the ZR-1) and new wheels. Everything else was pretty much a carryover, though the price of the ZR-1 had now ballooned to \$64,138, making it the first GM automobile to carry a price beyond \$60,000.

For **1992**, the L98 was dumped in favor of the new next-generation small-block V8, the LT1 (no hyphen, unlike the '70 version with the similar name). The LT1 was rated at 300 hp thanks to significant revisions to the cylinder heads, accessory drives, cooling system and fuel injection. But

despite that healthy increase in output, it was also an even more engaging driving companion than the L98. Along with the LT1 came traction control — Acceleration Slip Regulation (ASR in GM speak) — whose best feature was that it could be turned off.

On July 2, 1992, the millionth Chevrolet Corvette, a white '92 convertible, was built.

A special 40th anniversary package, consisting mostly of badges and special Ruby Red paint, was offered for **1993** on both LT1 and ZR-1 Corvettes. Otherwise, the most notable change for the year was refinement of the LT5 engine in the ZR-1 that boosted its horsepower from 375 to an epic 405: in real-world terms (accounting for the difference between the old SAE gross and current SAE net rating methods), the most powerful production Corvette up to that time. Other changes were minimal.

An airbag was added for passengers in the **1994** Corvettes, while the cockpit's trim and steering wheel were refined. The LT1 was treated to sequential fuel injection that improved drivability and simplified emissions control but didn't increase total power output. The ZR-1 got new five-spoke wheels, but that's about it.

New side gills distinguished the **1995** Corvette from previous editions, but other changes were much more subtle and included improved brakes, revised springs, de Carbon gas-charged shocks and a quieter-running engine fan. And for the third time, a Corvette (this time a convertible) paced the Indy 500.

It was also the last year for the ZR-1. "When the LT5's throttle body opens into the 16 tuned intake runners (assuming the power key is twisted to 'full')," Motor Trend's intrepid scribe wrote in its last ZR-1 test, "it humps." Beyond hazing the P315/35ZR17 Goodyear Eagle GS-Cs under the car's trademark swollen flanks when accelerating, it bursts down the quarter-mile in 13.05 seconds at over 117 mph. Getting to 60 from rest takes only 4.9 seconds, and getting from 60 to 100 takes only 4.8 more. The midrange power is even better than the Ferrari F355's.

"The engine is sophisticated, but the sound of it and the transmission could only be more involving if the driver sat in the crankcase. The ZR-1's mechanical character thrills in an era when so many cars isolate their occupants. Like all current Corvettes, the handling limits are high, but the ZR-1's larger tires mean that once those limits have been exceeded that it's even tougher to rein in. And, like all current Corvettes, the cockpit is a challenge to enter and cramped once inside."

For **1996**, Chevy followed up the ZR-1 with two unique editions that would mark the end of C4 production. The first was a "Collector's Edition" available on coupes and convertibles that consisted mostly of special emblems, five-spoke wheels and Sebring Silver paint. Far more intriguing was the Grand Sport, which swiped its name and blue-with-white-stripe paint job from an early-'60s racing Corvette and featured an amplified version of the LT1 small-block called the "LT4" that made a healthy 330 hp. A debate still rages on whether the ZR-1 or Grand Sport best expressed the essence and potential of the C4 Corvette.

What was obvious, however, was that it was time for a new Corvette.

C5: World Beater (1997-2004)

The fifth-generation Corvette was the most wholly new Corvette since the '53. Not even the engine carried over from the C4, and the entire concept of how the car was built changed.

Unlike every previous Corvette that bolted its transmission directly behind the engine, the **1997** version split the transmission off and placed it in the back of the car between the rear wheels where its weight could be used to offset that of the engine in the front. This transaxle arrangement had been used before on cars like the Porsche 944 and 928, but it was a radical departure for the Corvette. The suspension itself still used aluminum links and transverse leaf springs, but the wheels and tires were now 18-inchers in the back and 17s up front and there was no provision for a spare tire, since all tires would be of run-flat design.

The new frame used large, hydroformed rails and a thick backbone for extra strength, while relying on engineered wood products to make up part of the floor. The hatchback coupe body (the only body offered during '97) again evoked styling themes established in the previous two generations of Corvettes, though with reduced front and rear overhangs as the wheels moved out toward the corners of the car. Also, the clamshell hood was gone in favor of a less expensive conventional hood.

The C5's engine was also completely new and unrelated to any previous Corvette V8. While still displacing a nominal 5.7 liters and using a single in-block camshaft to drive the two valves per cylinder via pushrods like the old small-block, the C5's "Gen III LS-1" was an all-new, all-aluminum design using all the latest production techniques. And its output was a satisfying 345 hp. The rear-mounted transmissions were either a version of the Borg-Warner T56 six-speed manual or Chevy's own 4L60-E four-speed automatic in a new case for this application.

With so much power in such a capable chassis, the C5 Corvette was an instant sensation. "As if anyone doesn't know it already, the new Corvette is unfathomably good," wrote Motor Trend in one early comparison test. "Despite being the least expensive car gathered for the Decathlon, its 4.8-second clocking to 60 mph is as quick as the most expensive car's and matches that Ferrari's quarter-mile elapsed time as well. On top of that, it's roomy, easy to get in and out of and forgiving of almost any boneheaded input from the driver. In its 45-year history, the Corvette has never before been so excellent in so many ways relative to its competition. It's a colossal achievement."

Wisely not messing with something so fundamentally wonderful, Chevy merely expanded the C5 Corvette range for **1998** by adding a convertible model. And for the first time since '62, this convertible included a trunk that was accessible from outside the car. Magnesium wheels were also offered as an option this year for those seeking the ultimate in unsprung weight savings. Again a Corvette convertible paced the Indianapolis 500, and again Chevrolet offered replicas to the public: this time in bluish purple.

A fixed-roof coupe, lighter in weight than either the hatchback coupe or convertible, was added to the **1999** Corvette lineup. The intent behind the fixed-roof coupe was hinted at by the fact that it could only be had with the six-speed manual transmission. Otherwise the most significant addition to the '99 Corvette options list was a surprisingly effective head-up display unit that projected major information on the windshield in front of the driver.

Gone from the **2000** Corvette was the passenger-side door lock cylinder, as Chevy concluded that the keyless entry system made it unnecessary. Otherwise, all that was left to be excited about were two new exterior colors (Millennium Yellow and Dark Bowling Green Metallic), a new interior color (Torch Red) and new five-spoke forged aluminum wheels.

The real reason for the fixed-roof coupe became obvious with the **2001** model year as Chevrolet brought forth the ferocious Z06 Corvette that year. Running a revised high-compression, low-reciprocating-weight version of the LS1 dubbed the LS6, the Z06 went into battle with 385 hp, shooting its exhaust out a titanium system. The Z06 also got a special FE4 suspension system that was stiffer and had thicker anti-sway bars than other C5s, special lightweight wheels and bigger, lighter, more aggressive Goodyear tires that weren't run-flat in design. In just about every way, the Z06 either matched or exceeded the vaunted ZR-1's performance and did so for far less money.

Regular C5 owners weren't completely overlooked during 2001, however, with the LS1 seeing its output increase from 345 to 350 hp. It was also an even more flexible and torque-rich engine.

As good as the '01 Z06 was, the **2002** Z06 was even better, as output of the LS6 jumped to an astounding 405 hp, matching the highest output of the ZR-1. Furthermore, the Z06's suspension was retuned to perform even better than before. On the LS1-powered side of the Corvette equation, there were revisions to the sound systems and a new Electron Blue paint color.

Chevrolet acknowledged the 50th anniversary of the Corvette for **2003** with, naturally, a 50th Anniversary Edition Corvette. Available either as an LS1-powered hatchback coupe or convertible, the 50th Anniversary car got special deep red paint, a new Magnetic Selective Ride Control system and a bunch of logos. Of course, it was also used to pace the '03 edition of the Indianapolis 500. Other Corvettes got more standard equipment, including a power passenger seat and dual-zone climate control system. The Z06 was basically unchanged.

The C5 entered the **2004** model year with everyone fully aware that this would be the last year for this beloved Corvette. There were commemorative editions of all three models, with the Z06 featuring a carbon-fiber hood and revised shock valving. If there was ever a car that didn't seem to need changes, this was it.

C6: Power Player (2005-'13)

Rather than start over with a clean slate, Chevrolet's engineers decided to take the best aspects of the C5 and build upon them. The idea was to create a car that does more things well than performance cars costing two or three times the price. The chief goal for the new Corvette was to improve its refinement and performance while addressing every notable imperfection of the previous generation.

At first glance, the **2005** Corvette is little more than a styling refresh; dig deeper, though, and the C6 is much more. Exposed headlamps, not seen on a Corvette since 1962, combine with a lean grille to create a distinctive "face." Addressing complaints of the C5's thick tail, the backside was slimmed down so as not to appear as disproportionate as before. In profile, the sharply cut lines that trail away from the side vents look borrowed from the Dodge Viper, yet the overall look still says Corvette — even more so than the C5.

For the first time since 1968, an engine with 350 cubic inches (5.7 liters) of displacement was offered under the Corvette's hood as the C6 used a new 6.0-liter "LS2" V8 as its sole power plant. Output came in at 400 hp and 400 pound-feet of torque, providing performance on par with the best from Italy and Germany. According to Chevrolet, the Corvette could rush from zero to 60 mph in an adrenaline-pumping 4.2 seconds, continuing on to a top speed of 186 mph. In Edmunds.com's first

test, a 2005 coupe equipped with the standard six-speed manual reached 60 mph in 4.8 seconds and blitzed the quarter-mile in 12.9 seconds at 109.1 mph.

For 2006 the C6 generation was treated to a serious upgrade with the addition of a newly optional six-speed automatic transmission on regular Corvettes. But more gloriously, this was also the year the Z06 returned running aluminum frame rails, an aggressively tuned suspension and oversize tires and fortified with a new 7.0-liter "LS7" version of GM's small-block V8 rated at an otherworldly 505 hp.

"It's probably pathetic to talk about going on a date with a car instead of a human being," wrote Erin Riches in Edmunds' first test of the fresh Z06, "but the Corvette Z06 is anything but a cold, dead hunk of metal and plastic. In fact, it's more alive than many of the men I see at the gym, straining (oftentimes loudly) to pump some bulges into arms rendered slack by life at the office. Without question, that vitality comes from the size XL V8 under its hood, a V8 so rich in torque that the center console plastic is burning hot within an hour. And of course every upshift tamps you down into the seat, because the Z06 is one of those touchy-feely kinds of dates."

For the record, the 2006 version of the Z06 catapulted from zero to 60 mph in 4.5 seconds and shattered the quarter-mile in 12.2 seconds at a truly astonishing 120.2 mph. The carryover 2007 edition bettered those numbers with 4.1-second 0-60 clocking and a quarter-mile run in 12.0 seconds flat at 121.8 mph. Utterly, blisteringly, ridiculously quick.

After a carryover year in 2007, the 2008 edition of the Corvette appeared equipped with a new 6.2-liter "LS3" version of the small-block V8 aboard rated at 430 hp. Now even the cheapest Corvette (the base coupe with a six-speed manual transmission) ripped to 60 mph in just 4.5 seconds and tore down the quarter-mile in 12.2 seconds at 114.8 mph. That's dang near ludicrous. And there was more ludicrousness to come in 2009. Supercharged ludicrousness.

The reincarnated ZR1 arrived for 2009 equipped with the LS9 version of the 6.2-liter V8 that featured a belt-driven supercharger atop it, pumping total output to 638 hp. That's 38 hp beyond four times what the first Corvette's engine was rated at. And naturally it made the ZR1 the quickest and fastest Corvette ever...by far.

"Brute force," Josh Jacquot wrote in the first test of the new ZR1, "a quality we can't help but assign to any car generating 638 hp, is by definition anything but subtle. Yet the 2009 Chevy Corvette ZR1 manages at once to be both brutally quick and remarkably mild-mannered. Its quarter-mile acceleration is quicker than any production car we've ever tested, its chassis is benign but highly

capable and its carbon-ceramic brakes are mind-bending in their effectiveness. This new 'Vette offers an unlikely combination of performance and real-world usability that we're proud to experience in an American car."

In testing, the ZR1 slammed to 60 mph in 3.8 seconds and consumed the quarter-mile in one big 11.5-second gulp at 128.3 mph. Remember, the first Corvette needed 11.5 seconds to reach 60 mph and this one does a whole quarter-mile in the same time while steaming more than twice as fast. Amazing.

Yet another variation on the Corvette theme arrived in the form of the 2010 Grand Sport. Available as both a coupe and convertible, the Grand Sport effectively replaced the Z51 performance package option and added in wider bodywork, wider tires and a dry-sump oiling system on models equipped with a manual transmission.

A "Carbon Edition" of the Z06 became available for 2011. It included a carbon-fiber hood to knock weight down and more aerodynamic body bits. Only 500 were made.

A "Centennial Edition" of the Corvette was produced for 2012 that celebrated Chevrolet's 100 years making cars.

In 2013 there was the 427 Convertible that mixed the Z06's 505-hp 7.0-liter engine with the drop-top body. And finally, with the Corvette at 60, in 2013 there was also a 60th-anniversary version of the 427 Convertible.

And with that, the C6 passed from this world.

C7: Starship Stingray (2014-Present)

Taking a conceptual leap forward, the seventh-generation Corvette is built around an all-aluminum structure that surrounds the entire passenger compartment. It's not just a plastic body atop frame rails anymore.

The robustness of the new structure allows every other element of the C7 to remain precisely located no matter what ludicrous antic it's asked to perform. It also helps this Corvette achieve an ideal 50/50 front-to-rear weight balance.

Even in base form, the C7 is one of the most powerful Corvettes ever. A new 6.2-liter version of the GM small-block V8 (named LT1 after two previous Corvette power plants) powers the C7. As with every previous small-block it still uses a single in-block cam to operate only two valves per cylinder through pushrods, but it also incorporates such to-the-minute technologies as direct fuel injection,

active fuel management that deactivates up to half the cylinder when the engine is under light loads, and continuously variable valve timing. Rated at 455 hp, it's the most powerful base engine ever installed in a Corvette. In fact, 455 hp is more than three times the rating of the six-cylinder engine in the first Corvette.

But the hp rating only hints at the new LT1's performance. Thanks to the new technologies, it's also rated at 460 lb-ft of peak torque and produces 50 lb-ft more torque than the previous 7.0-liter LS7 (as used in the Z06) between 2,000 and 4,000 rpm.

So, even in this base form, the C7 is scaldingly quick. Stirring the new seven-speed manual transmission, Edmunds.com's first test of the new Corvette measured it blasting to 60 mph in only 3.8 seconds and blitzing the quarter-mile in 12.0 seconds flat at 117.3 mph. That 12.0-second run in the quarter-mile is equal to that of the 2013 427 Convertible Edmunds tested, though the 427's additional 55 hp do give it a slight edge in speed through the traps.

Overstuffed with new technologies ranging from electric power steering to an electronic limited-slip differential, the C7 pushes the Chevrolet Corvette legacy toward a new technological frontier.

There are coupe and convertible versions of the C7 available during 2014, but it's impossible not to contemplate what's still to come: the "big-tire" successors to the Z06 and ZR1. It's all enough to give a Corvette lover the vapors.