C O R V E T T E

C O R V E T T E

FIVE DOLLARS

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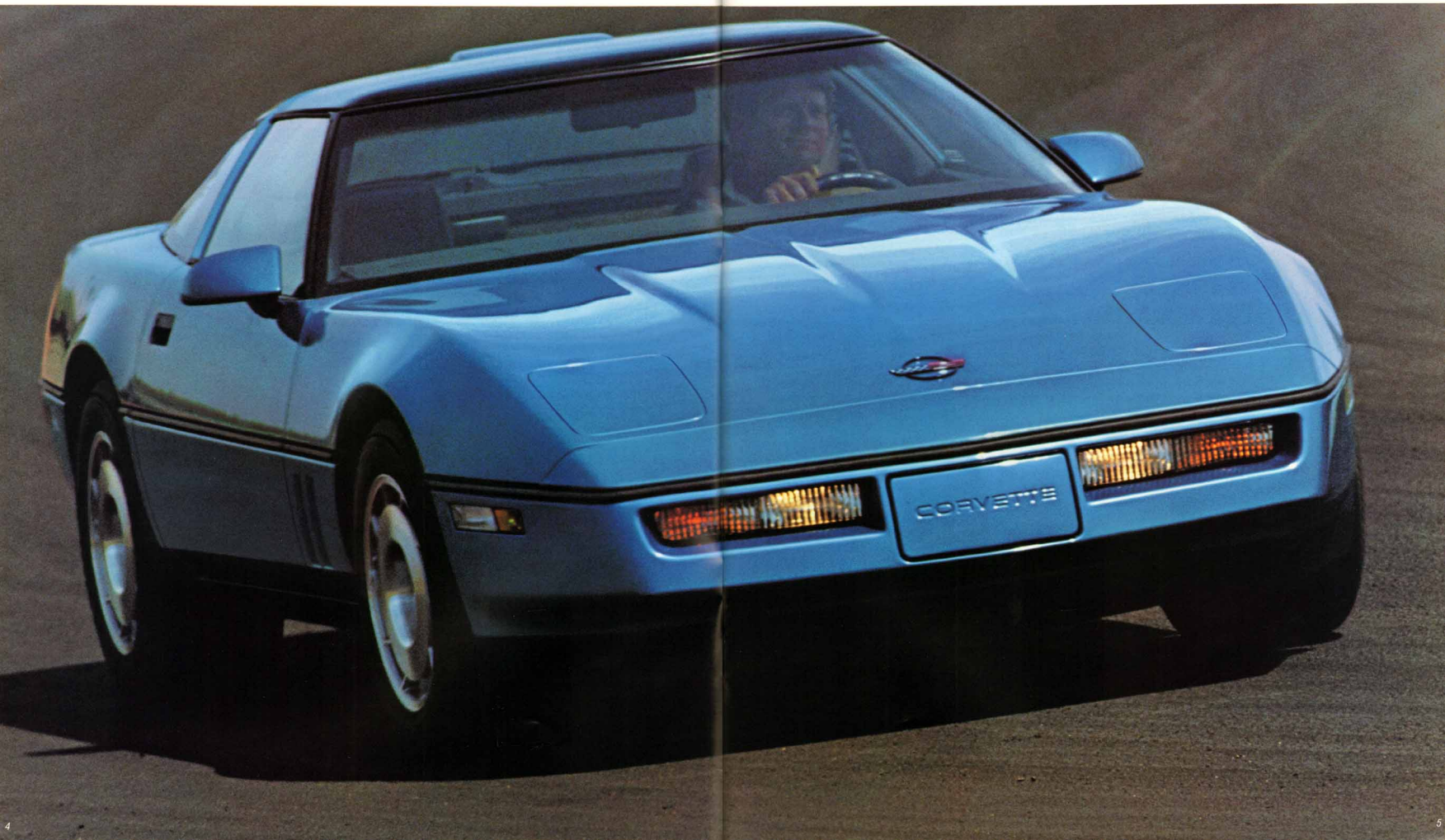

CORVETTE

The 1953 Corvette, the beginning of a long, proud tradition, created a sports car that was boldly and distinctly American.

There's always been something special about the American experience. A sense of optimism, perhaps; a spirit of independence, and the vitality born of hope. Generations of writers, analysts and, most especially, immigrants have testified to the promise that is America, a vision articulated more than 200 years ago by Hector St. John de Crèvecoeur, writing in his Letters From an American Farmer, published in 1782. To paraphrase: One...no sooner breathes our air than he forms new schemes...begins to feel a sort of resurrection...and embarks on designs he would never have thought of....

Thus, when the concept of "sports car" came home to America after World War II, it, too, begged for translation into the local idiom. Usually, something gets lost in such a redefinition, but, in typically American fashion, the term "sports car" gained in several respects.

First, it became a car that a tall person could get into without feeling forced into a torture machine. It was a vehicle that did not induce claustrophobia in slow, stop-and-go city traffic. Yet this machine exuberantly greeted the long, level straights from the Mississippi to the Rockies as a welcome portion of the 3,000-mile New York to Los Angeles trip.

In other words, a car for a broad-shouldered, democratic country that spread its arms wide enough to encompass vast distances and embrace diverse peoples.

The answer, since 1953, to America's demand for a native sports car was and is Corvette.

To qualify for this lofty position, Corvette had to be—and not be—many things. It could not be a mere badge of aristocracy, so capricious it required the constant ministrations of a mechanic to keep it running. Rather, it had to encourage sports car driving as an everyday habit. It could not be an arbitrary mechanical complexity assembled into an awkward, uncomfortable package as were so many of its European antecedents. Instead, it had to invite one to spend energy driving it, not fighting it. Additionally, it had to be dependable, ready to go in a moment and able to stay that way.

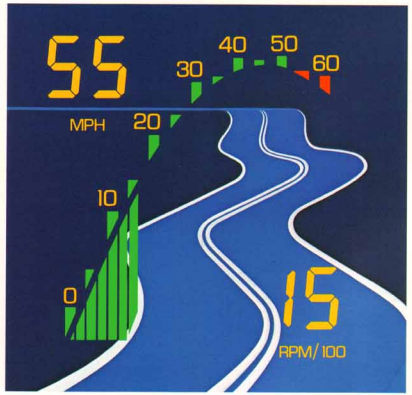
Most of all, America's sports car had to have nothing to apologize for. It had to hold its head (and reputation) up among the most prestigious from across the eastern ocean and, later, the western sea.

These were the desiderata when Corvette embarked upon its mission in 1953. Corvette did not begin by copying or playing catch-up. Rather, the '53 Corvette, like all its descendants, was a bold, original statement that openly and proudly proclaimed itself American.

The frontal stance: Wide-eyed, fearless, with a grillwork mouth of bared teeth for a country whose heroes spanned the range from Charles Lindbergh to Daniel Boone. The lateral aspect: Strong curves, not delicate enough to become feminine, but with the powerful grace of Paul Bunyan and Babe, his famous blue ox. At the last: A vestigial—or, perhaps, embryonic—tailfin (where Corvette led, others followed).

Philosophically, Corvette hasn't changed in 33 years. Mechanically, everything has changed. Well, yes, the wheels are still round, but Corvette's march of technical progress has been

Vital readouts interface with the thrill of the open road in this artist's interpretation of the 1986 Corvette instrument cluster.



By 1957, Corvette had already begun to establish itself as an innovator in the engineering arena. This advertisement announced the Rochester fuel-injection option, a first on an American production car.

a 3-speed Turbo Hydra-matic in 1968, the development of nonmetallic, composite-material springs in 1981. And for 1986, the addition of Bosch ABS II anti-lock braking.

However laudable the technical progress, though, people who form "new schemes" demand more. A sports car is also a work of art that must lead and elevate as it satisfies.

The original '53, marrying the long-hood tradition of in-line engines to tailfins reflective of recently discovered supersonic speed and the first swept-wing jet aircraft. The Sting Ray of 1963, summarizing the early maturity of sports car awareness—lean, low, sleek, and looking fast while standing at a curb. The voluptuous 1968 model as the full articulation of that consciousness. And beginning in 1984, the progressive, wind-cheating forward wedge. As in its technical elements, Corvette styling has always been a proof of excellence.

Europe has been, and remains, many peoples and places separated by discrete boundaries, languages and customs. America is many things, too, but underneath it is a unity born of individual freedom. Corvette was born to suit the experience that is America—and let Europe take what view it would. Literally and figuratively, for 33 years, that view has primarily been of the taillights.

And throughout all, Corvette, in essence and in spirit, remains true to its mission: America's own sports car.

constant and inexorable: The V8 engine of 1955, its mutation into the famous 283 cubic inches of 1957 with the Rochester fuel-injection option, on to the legendary 454, and down to the current 350 V8—5.7 Liter in more contemporary parlance—with Tuned-Port Fuel Injection, an engine that has earned the same respect and affection that the classic "cast-iron wonder" did 30 years ago.

And along the way: a 4-speed manual transmission in 1957, disc brakes all around in 1965,

How appropriate. The assigned designation—Highway 1—matches the quality of the experience. For with its twists and corkscrews and bistros hung at cliff-side and oh-my-gosh vistas around every turn, this exuberant stretch of roadway just may be the premier driving experience on the North American continent.

There are times when I wish I could watch as well as drive. That is to say, when I'm hurrying a vibrant red Corvette up a road as beautiful as California's coastal Highway 1...shifting down to preselect the proper gear for the upcoming series of turns, setting the Corvette into the first corner with my left arm out straight to the top of the steering wheel, my head cocked slightly to the right, my foot carefully opening the throttle as I try to "read" the surface of the road...well, I wish I could watch that process, see myself as the poor henpecked guy in the black Ferrari Dino saw me—tearing along the dotted line, sweeping by in an easy passing maneuver, leaving him behind like he was chained to a post.

We Corvette drivers, and other car enthusiasts, owe a great debt of gratitude to former California state senator Fred Farr who represented Monterey County in 1963 and launched the movement that resulted in California's Master Plan for Scenic Highways. When Senator Farr's plan became law, California's State Route 1 became the state's first official scenic highway. Before that, it was destined to be turned into a freeway. Thank you, former senator Farr.

The part of Highway 1 that we celebrate in these pages is the section that runs between San Luis Obispo and Carmel, right along the precipitous edge of the Pacific Coast. It may well be the most beautiful road in North America. It is certainly one of the most beautiful stretches of pavement in the entire world. If you are a Corvette person (even though you may never have known of California Highway 1's existence) you have smiled in your sleep as you dreamed of a sinuous ribbon of asphalt that looped and danced endlessly ahead of your car—mountains on one side, ocean on the other—defining the westernmost edge of the American continent.

Nobody knows who first made his way along that coastline—perhaps some early Indian following old game trails—but we do know that Spanish governor Don Gaspar de Portola led an expedition from San Diego to Monetereey Bay in 1769 and 1770 that covered the stretch between San Luis Obispo and San Simeon before becoming discouraged by the rough country and heading inland.

San Simeon is where newspaper magnate William Randolph Hearst built his famous castle, a monument he called "La Casa Grande." That was in 1922, when the road was still unpaved. Paved, Highway 1 is about as exciting a road as a dedicated driver can find on this continent. Unpaved, it must have been heart-stopping to contemplate.

The reason that it is such a mecca for enthusiast-drivers, so rewarding for the operator of a vehicle with the handling and road-holding of the 1986 Corvette, is the fact that the rugged, beautiful Santa Lucia mountains march down to the sea along here and cause the great changes in elevation and the long chains of ess-bends and hairpin curves that give the road its special character.

This car, too, has special character. Everybody knows that a Corvette on a GM test track does zero-to-sixty-to-zero in 8.4 seconds. Everybody knows that it's capable of screaming around that same test track's skidpad like it was on a tether. Every aspect of its performance is so good that it makes all descriptive language sound like hype. Yet the Corvette's special character becomes most apparent at that moment when you slide down behind the wheel for the first time. Let your eyes sweep the instrument cluster and console. Sit in the position that's most comfortable for you, then just reach out and touch all the important stuff. The steering wheel rim. The shift lever. Flick the overdrive switch in the top of the shift knob. Flip the windshield wiper control with a fingertip. Hit the headlight switch and watch the lights flip up into position. It's all right where you'd put it yourself. That's special.

This is a great car, make no mistake. Cars as exciting as this one are generally the products of tiny factory-boutiques where they get built one at a time, at a cost that easily outstrips the price of a four-bedroom house with a good pool table in the living room and a whirlpool on the deck out back.

If you're concerned about your status in the world, if your image needs shoring up and you were just going to throw the money away anyhow, maybe you ought to invest a hundred-grand or so in one of those. It may not go as fast as a Corvette. It most likely won't hold the road as well. It probably won't come with anti-lock brakes, and there'll be a lot of little glitches to correct from time to time, just because they can't build cars in a boutique and get the same consistent levels of quality that are possible in a modern assembly plant. But you know your needs.

On the other hand, if you're pretty comfortable with who you are and what you represent, and you absolutely can't wait to get on the road and see what the world has served up for you each morning, you may want a new Corvette.

You might also want to ship your new Corvette to Europe and take a really super vacation with the 75,000 dollars you'll save by not buying the boy-racer from the boutique.

We should acknowledge the contribution of a guy named Dr. Amar Bose to this unforgettable ride up the coast, and, while we're at it, I'd like to pay my compliments to Miss Alicia de Larrocha, the famous concert pianist who accompanied me in my northward rush. As I left the freeway spur west of San Luis Obispo and headed onto Highway 1, I dropped one of her cassettes into the GM-Delco Bose tape deck and away we went. She never missed a beat or dropped a note. While I played the Corvette's 5.7 Liter V8 and enjoyed the baritone pulsations rolling out of its exhaust extensions, she played Mozart, Albéniz, Granados and Mendelssohn. Those guys have never had it so good. Nor have I. Dr. Bose's sound system allowed me to play my concert tapes at levels that should have fried my tympanic membranes. The reproduction was never noisy or instrusive, never disagreeable. In fact, the music just urged me on and tied it all together—road, sea, sun, sky, and one terrific set of wheels.

—David E. Davis, Jr.

Cole Weston grew up in a family of photographers. While assisting his famous father Edward Weston, the younger artist found himself fascinated by color photography, then an emerging field. Intrigued and inspired, Cole went on to pioneer the medium, creating bold yet sensitive color images. Many exhibitions and books later, Cole Weston continues to indulge his passion, as the photographs of the 1986 Corvette along the California coast demonstrate so dramatically.

As long ago as the 12th century, a widely traveled imperial diplomat eloquently described the alluring charm of the Romantische Strasse. Eight centuries later, Germany's oldest and most celebrated tourist route still leads the traveler through a rich heritage of history, art and culture. While well integrated with the modern autobahn system, the Romantic Road offers a bastion of peace and serenity as it wends its way through wine villages and medieval cities, past ornate castles and town squares.

There are a number of excellent reasons for taking a brand-new 1986 Corvette to West Germany, but the no-speed-limit autobahns are not the best ones.

There's no question that an American driver enjoys a sense of freedom unmatched anywhere else in the world when he points his Corvette out onto the roadway, runs the speedometer up to autobahn cruising speed, and holds it there for mile after glorious mile. But even as those high-velocity miles roll by, one glances from one side of the superhighway to the other and tries to imagine the neat little roads that must lead off across those green hills to those distant clusters of church steeples and tile roofs.

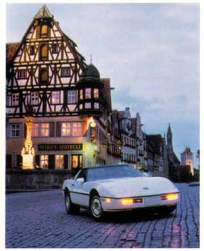
It's back roads that really beckon the serious enthusiast. Other countries have great roads too, but Germany seems to have more of them, and German enthusiasts make such good use of them. Thus, it's not all that unusual to set out for a day's serious driving and encounter drivers, who, like yourself, are out there for the pure joy of high-spirited little jaunts through the hills. This helps a dedicated Corvette driver appreciate even more the great capabilities built into his chosen automobile.

Obviously, two of those capabilities are tailor-made for the autobahns, where very high speeds and equally high levels of traffic density are the rule. The high overall speed dictates that the most pleasant cars to drive will be the ones with good acceleration and excellent high-speed cruising capability. There aren't many that score better than Corvette in these categories.

The great density of autobahn traffic guarantees that lane closures, fender-bender accidents, the odd flat tire will tend to cause sudden traffic blockages, and these can be a bit more exciting than most of us would wish. Example: A light rain is falling. You come over the top of a hill, halfway through a long sweeping curve that keeps bending away out of sight ahead of you, when suddenly you come upon the grandmother of all traffic jams. What do you do?

Nothing cute, that's for certain. You simply apply the brakes and hope for the best.

Your Corvette will stop. In fact, it will stop so well that you'll be proud, pleased and perfectly amazed. You can express your gratitude to one of the best friends you'll ever have, a device called the Bosch ABS II anti-lock braking system.



Bosch ABS II is fully described on pages 20 and 21, but simply put, what it does is monitor all four wheels and automatically "pump" the brakes when one or more wheels begin to slide. Its effect on the Corvette is to help prevent brake-induced wheel lockup and to shorten stopping distances on most surfaces. Its effect on me is even better. It makes me grin like a fool. Seriously though, anti-lock brakes are a remarkable and significant advance worthy of the proud heritage that's Corvette.

Most Americans begin their visits to Germany stepping off a jumbo jet at the Frankfurt am Main airport. For that reason, we planned our Corvette trip so that most of the driving took place within a few hours of Frankfurt. Specifically, we wanted to drive part of the famous Romantic Road between Würzburg, in Franconia, and Fussen, deep in Bavaria at the foot of the German Alps. This made it possible for us to stay in Rothenburg ob der Tauber, a lovely Renaissance town that's a favorite with visitors from the States.

On the first day, we drove from Frankfurt to Würzburg on the autobahn, then picked up the Romantic Road to Rothenburg. An hour or so at autobahn speeds and you're in Würzburg. You can stop and visit the Residenz palace, which is a breathtaker, or you can head west to Tauberbischofsheim and Bad Mergentheim, where you pick up the Tauber River and turn south. Now it's all two-lane—gorgeous two-lane that winds through farmland and deep, brooding forests. Virtually every one of the larger towns features a near-perfect Renaissance core and often a castle worth touring. But the pleasure of the car on the road is such that you'll find it hard to stop for sightseeing.

The end of the first day's drive is worth the entire trip. The last 20 or 30 kilometers into Rothenburg are among the best you'll ever drive. I actually turned the white Corvette around and returned for another pass. Rothenburg sits high on a hill, its defensive wall and stone towers still ready to repel besiegers, and you reach it through a winding series of perfectly parabolic 180-degree turns. Leave it in second gear and fly up the hill, letting those big Goodyear Gator-backs do the work.

You could easily spend all of Day Two poking around in Rothenburg, but you want to drive. The Corvette creates such a stir on the streets of the old town that you have to garage it about four blocks away. Rumbling through those narrow, cobbled streets at walking speed is almost as much fun as sailing through the switchbacks outside the wall.

A 270-degree loop around town puts you on the road to Langenburg, traditional seat of the Hohenlohe-Langenburg princes and site of their wonderful fifteenth-century castle. The road crosses a broad agricultural plateau between the valleys of the Tauber and Jagst rivers. It dips and winds and makes you appreciate Corvette's independent rear suspension even if you're not quite sure what it is.

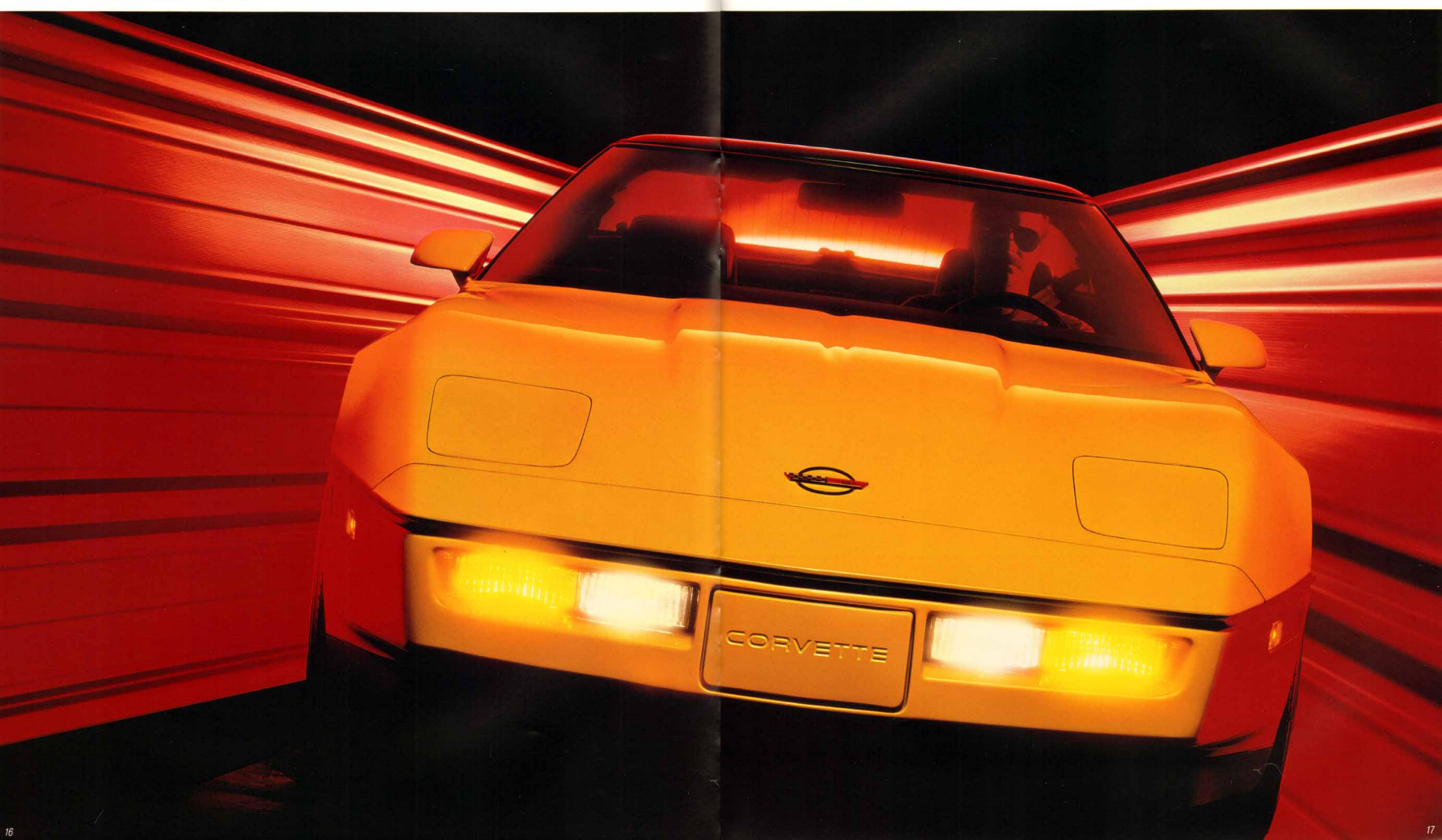
At Langenburg, you do three things. You take the tour of the castle (Schloss, in German), have a coffee and a breakfast roll at the Schloss-cafe, overlooking the deep, green valley of the Jagst. After coffee you visit the German National Automobile Museum across the way. Good stuff. Then you dive down the mountainside to the river road, make a loop southeast to Dinkelsbühl—another medieval town, every bit as remarkable as the others you've seen so far—and soon you're heading north, back toward Rothenburg again.

This is a pleasant day's drive and puts you back at your hotel in time for a snack on the terrace. You can sit there with all your maps and guide books, planning Days Three, Four and Five, or you can simply relax with your companion and marvel at what a great driving team you make, with the help of the '86 Corvette.

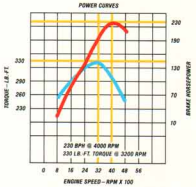
—David E. Davis, Jr.

Larry Dale Gordon discovered long ago that he has two consuming interests—travel and photography. He also realized that by combining the two, he could create the ideal career. Some 20 years and 60 countries later, Larry shoots exotic locations, people, beauty, fashion, cars and a host of other subjects with equal enthusiasm. His photographs of the 1986 Corvette in West Germany and Italy are ample testimony to the fact that both his wanderlust and his reputation as an artist are secure.

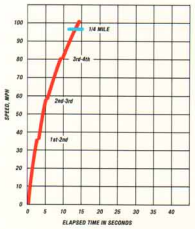
David E. Davis, Jr., is one of the lucky ones. He's been able to parlay a lifelong love affair with cars into a career that has spanned more than 25 years. Besides being a writer and former editor/publisher of Car and Driver magazine, he has raced cars, traveled the world over and become a connoisseur of fine automobiles. Recent excursions, which brought David and the 1986 Corvette together in California and West Germany, indicate that his zeal has not diminished in the least.


CORVETTE

The heart of Corvette performance—the 5.7 Liter Tuned-Port Fuel-Injected V8.



Torque specifies how hard the engine twists on the drive shaft. As this chart depicts, Corvette's peak torque is promptly followed by peak horsepower, indicating a broad usable power range.



An engine is known by how rapidly it can convert energy into motion of a given velocity. Compare Corvette's acceleration figures with the best from the rest of the world.

Power Teams

To be the engine of a Corvette has always meant living up to high-performance aspirations. Of course, the definition of performance has changed markedly over the years—from the first three-carburetor six-cylinder of 1953, through the original V8 of 1955, and on through a series of horsepower behemoths, culminating in the 454.

The demands of the '80s are, once again, different and can be summarized in a single word: efficiency. That is, to extract maximum energy from a given measure of fuel, while minimizing energy loss. Fortunately, fuel crises and emissions controls constitute not the end of performance, but challenges to be met.

5.7 Liter Tuned-Port Fuel-Injection (TPI) V8

But first things first. Namely, the heart of Corvette performance—today's manifestation of the timeless small block V8.

Displacing 5.7 liters (350 cu. in.), this engine, exclusive to Corvette, features 90° V8 design, overhead valves and an over-square, short stroke configuration (bore 4.00, stroke 3.48) with a compression ratio of 9.0:1. Copper core spark plugs, ball-tip push rods, one-piece oil pan and crankshaft seal are included, as well as Electronic Spark Control (ESC) to tailor spark advance to the level of octane in the fuel.

From those basics, the Corvette powerplant is modified to meet contemporary engineering requirements. Tuned-Port Fuel Injection for clean, complete combustion, for one example, and advanced aerodynamics for another.

Because a typical engine uses up a portion of its own power just sucking in air, Tuned-Port Injection lets fluid dynamics do much of this work, leaving more energy available for the wheels. Corvette's system begins with a Bosch Mass Air Flow Sensor. This means a hot wire sensor holds an electronic finger to the wind to determine air mass by measuring temperature changes in the hot wire caused by different amounts of air passing over it.

This data is monitored more than 100 times each operating second and relayed to the Electronic Control Module (ECM) component of Corvette's Computer Command Control. Simultaneously, the ECM lays its hand on the engine to see whether it's cold, hot or in between. Then, the ECM meters the air/fuel mixture to suit the exact circumstances, from an oxygen-rich coastal highway to the oxygen-lean atmosphere of an 11,000-foot mountain pass.

That's where the tuned port runners take over, coordinating, or "tuning," the size, shape, and length of the cyclic waves of air moving through the closed induction system, "stuffing" the cylinders with air. Each runner, individually tuned to each cylinder, curves 180° from the gleaming cast-aluminum air plenum to meet its assigned cylinder on the opposite bank.

Concurrently, Electronic Spark Control, using a tiny pietro quartz sender in the cylinder block, senses the early stages of detonation caused by heat, humidity or low octane level. The ECM then retards spark a precise amount. The result is combustion optimized regardless of altitude, humidity, ambient temperature or other conditions.

For another contemporary response, aerodynamics. Certainly Corvette has a highly aerodynamic body (its drag coefficient registers a slippery 0.323). But Corvette also exploits aerodynamics in places where it doesn't show, specifically in the plumbing pathways that admit air into the engine. Notice there's no grille to interrupt air flow around the vehicle. Instead, a duct leading to a louvered plenum-type air cleaner behind the front facia supplies air to the engine. That helps keep the aero numbers impressively low.

To exhale, stainless steel headers carry waste from the engine to a dual exhaust system carefully engineered to fit the undercarriage configuration. The fact that the catalytic converter tucks up under the drive-shaft channel beam contributes to the low cowl and hoodline of the car.

You can see many engineering considerations manifested in the appearance of the vehicle, but little things you can't see mean a lot, too. For example, ultraprecise machining and fitting of internal parts allow the use of lower viscosity 5W-30 oil; 5W-30 significantly reduces the energy the engine uses just keeping itself well oiled. Again, less energy wasted on the way from the fuel tank to the wheels.

Many more details of this kind, even so basic a one as improved seals and gaskets to contain the lower viscosity oil, add up to an engine that can go directly from the assembly line to a grueling race and hold its high-throttle pace for 24 straight hours.

Horsepower and Torque

A sports car should be fun to drive, not because it keeps the driver busy pumping a clutch pedal and rowing a gear lever, but because, like John Henry's hammer, it does what its driver tells it to.

The steep, rapid "torque rise" of Corvette's engine is just such a response. Think of it, if you like, as a powerful 10-speed cyclist who can go quickly from the lowest speed to the highest. Rapid torque rise means no lagging when leaving traffic lights, no vacillation about forward motion when shifting to the next higher gear. Yet, with maximum torque occurring as early as 3,200 RPM, the engine need not be loaded to the redline for every upshift.

Horsepower comes from and relates to torque. The fact that 230 peak horsepower at 4,000 RPM follows hard upon peak 330 lbs.-ft. of torque at 3,200 RPM means an engine with a broad usable RPM range.

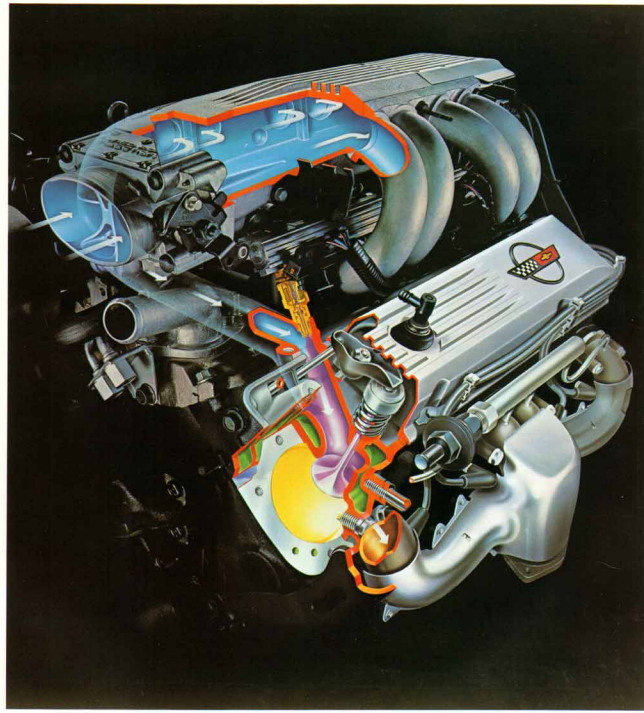
Transmissions

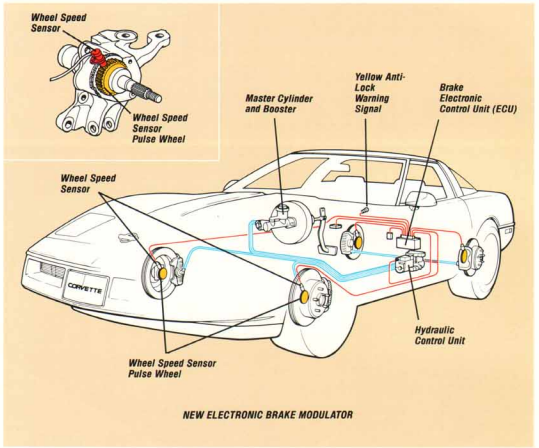
This broad range combines with a choice of transmissions—standard automatic with 4th gear overdrive or the no-cost-option 4-speed manual. Both the automatic and the manual have oil-water heat exchangers and aluminum housings. Aluminum contributes to rapid heat rejection (read: cooling). Superior cooling protects the transmission oil from degradation; that helps protect the bearings, gears and synchronizers when a Corvette exercises its acceleration and racetrack abilities.

As with Corvette's other features, the transmissions presume driver control. While the standard automatic shifts itself as smoothly as a ballerina executes an arabesque, the driver can dictate precise commands to the manual unit. With overdrive in the top three gears, the manual gives a choice of seven gear ratios so engine speed can be kept where it suits the driver's purposes, whether powering through a curve at a lateral acceleration of 0.91g*, slogging through congested city traffic or following those long western straightaways right into the sunset.

Oh yes, the bottom line on Corvette performance: zero to sixty in 5.6 seconds. Zero to a hundred in 14.9.*

*Achieved on the test track by professional drivers. Corvette equipped with optional Z51 Performance Handling Package, 3.07:1 performance axle, 4-speed manual overdrive transmission, P255/50VR-16 tires.





NEW ELECTRONIC BRAKE MODULATOR

Corvette's Bosch ABS II anti-lock braking uses computer electronics to control wheel lockup during hard braking. A crucial feature of the system are wheel sensors that inform the ABS II computer of the comparative velocity of each of the car's four wheels.

Handling

Leadership entails responsibility—the responsibility to show the way to the future.

For more than 30 years, Corvette engineering has shown the way to a true American sports car.

"So what," the cheering fans ask, "is left for an encore?"

Answer: Bosch ABS II—the anti-lock braking system, integrated with the 4-wheel discs, a development as significant today as the first hydraulic brakes were 50 years ago.

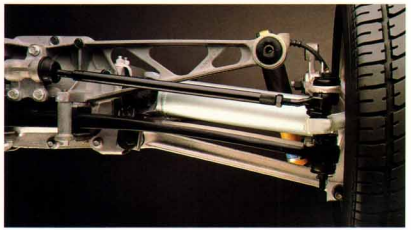
Anti-Lock Braking System

ABS II, developed for Corvette by Bosch, is a computer-controlled system. This state-of-the-art technology is applied automatically should the driver call for braking beyond normal tire/road interface capabilities.

Whenever braking begins, wheel sensors automatically inform the Bosch ABS II computer of the angular velocity of the four wheels. This control unit "watches" each wheel, noting its rate of deceleration and comparing it to a calculated reference speed. Should a wheel begin to spin down too quickly—i.e., if it begins to lock up or develop too high a slip rate—the ABS II system momentarily releases brake pressure at the wheel in question. When the sensor determines that the wheel is no longer approaching lockup, pressure is reapplied to maintain braking. Simultaneously, the computer calculates vehicle velocity and applies this information to the control strategy.

When called upon to do so, Bosch ABS II can adjust brake pressure as rapidly as 15 times per second, a rate even the most skillful professional driver cannot attain. Pressing the brake pedal, the driver's foot can feel ABS II pulsing away, diligently at work.

The result: A system that prevents flat spotting of tires, while helping assure smooth stops in most types of road conditions. A system that allows the driver to apply the brakes without wheel lockup. A system that provides improved control even with one wheel on a soft shoulder and the other on firm pavement.



The rear independent suspension features five-link connections, aluminum alloy components and composite-material transverse springs.

Tires

In a Corvette, if pure science prevails to control going and stopping, absolute magic lives where the tires meet the road.

Naturally, the specifications are exacting: A tire that approaches 0.91g lateral acceleration on the skidpad. A tire that's V-rated—in other words, capable of sustained speeds in excess of 130 MPH. A tire that delivers a projected 30-40,000 miles of tread life, thus mastering the high-performance/longevity dilemma in favor of both criteria. Finally, a tire that's quiet at highway speeds.

Enter the Goodyear Eagle P255/50VR-16, developed through the joint efforts of Goodyear and Corvette engineers. A unidirectional steel-belted radial mounted on 16" x 8-1/2" aluminum alloy wheels.

Four patches of rubber, each with little more area than the sole of a man's boot, designed to keep the car on the road even at high speeds, in tight curves or at braking rates over 1g of deceleration. If this be not marvel enough, those same small patches must move the car over table-smooth interstates, as well as city streets devastated by potholes.

Suspension

The engine has only to respond to one motion; the downward pressure of the driver's right foot. The tires must respond to all of the above, not to mention the shifts in the center of gravity as the car accelerates, maneuvers and stops.

How well those tire patches stay on the ground depends on how far the suspension system goes beyond the simple task of absorbing bumps to fulfill the demands of weight (and inertia) management. Corvette was one of the first in 1963 to install an independent rear suspension, at a time when many prestige marques from overseas retained their "live" axles. Corvette was a pioneer in the use of aluminum alloy suspension components—more expensive than steel, but much lighter. To further reduce unsprung weight, and to achieve an authentic technical innovation in the bargain, in 1981 Corvette went beyond the subtleties of metallurgy to the sophistications of polymer science, developing nonmetallic springs made of filament glass in an epoxy matrix—an achievement replicated most often in jet aircraft and space vehicles.

As the suspension responds to bumps, upper and lower A-arms of forged aluminum up front and five coordinated links at the rear locate the wheels in the proper planes. Knuckles and struts are also forged from aluminum. Tied to transverse monoleaf springs, front and rear, these components help assure minimal loss of traction during hard acceleration or braking.

Then there's roll to consider. As the car enters a turn, it naturally wants to lean. Here the monoleaf spring acts as a stabilizer bar. The reason is simple enough: Visualize the leaf spring trying to bend itself into an S shape as the body leans. It's the spring's resistance to bending into an S shape that helps minimize roll. That also means the actual stabilizer bars can be skinnier and lighter, which translates into less weight built into the car.

Steering? It's a rack-and-pinion setup that rides ahead of the front axle, helping lower the engine. Made of aluminum, the system responds to commands with virtually no lag.

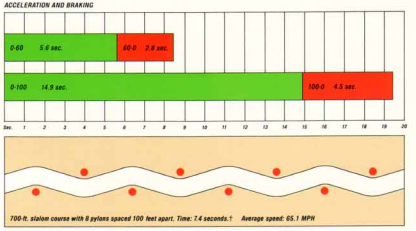
The sum of all this technology proves a bonus: a car as surefooted as a mountain goat, as agile as a cat and as solid as Gibraltar, a car that provides not the false security of insulation but gives the genuine security of involvement with the capabilities of the car.

Uniframe

Yet another element is necessary, of course. A skeleton to suspend the wheels and tires, to contain the seating package, to cradle the engine and drive train.

In Corvette's case that means a uniframe or space frame, which for two reasons is unlike anything in use before. (a) It's made of relatively thin sections of sheet steel spot-welded together, and (b) the fiberglass skins, in contrast to a conventional unitized body, are like the semi-monocoque system characteristically used in airplanes.

The concept involves marrying the uniframe or upper structure and the frame into a single unit. (In previous designs the birdcage was perched atop frame rails on rubber body mounts; the current generation Corvette has eliminated this heavy, bulky ladder-type frame.) Integrating the body/frame structure is more cost-efficient than older concepts. Even more important, it results in a stiffer, better structure underpinning the car.



†Achieved on the test track by professional drivers. Corvette equipped with 4-speed manual overdrive transmission Performance Handling Package and 3.07:1 axle ratio.

Four-wheel disc brakes feature a large booster for superb modulation, all-temperature brake pads designed to provide consistent performance, and aluminum calipers to reduce unsprung weight.

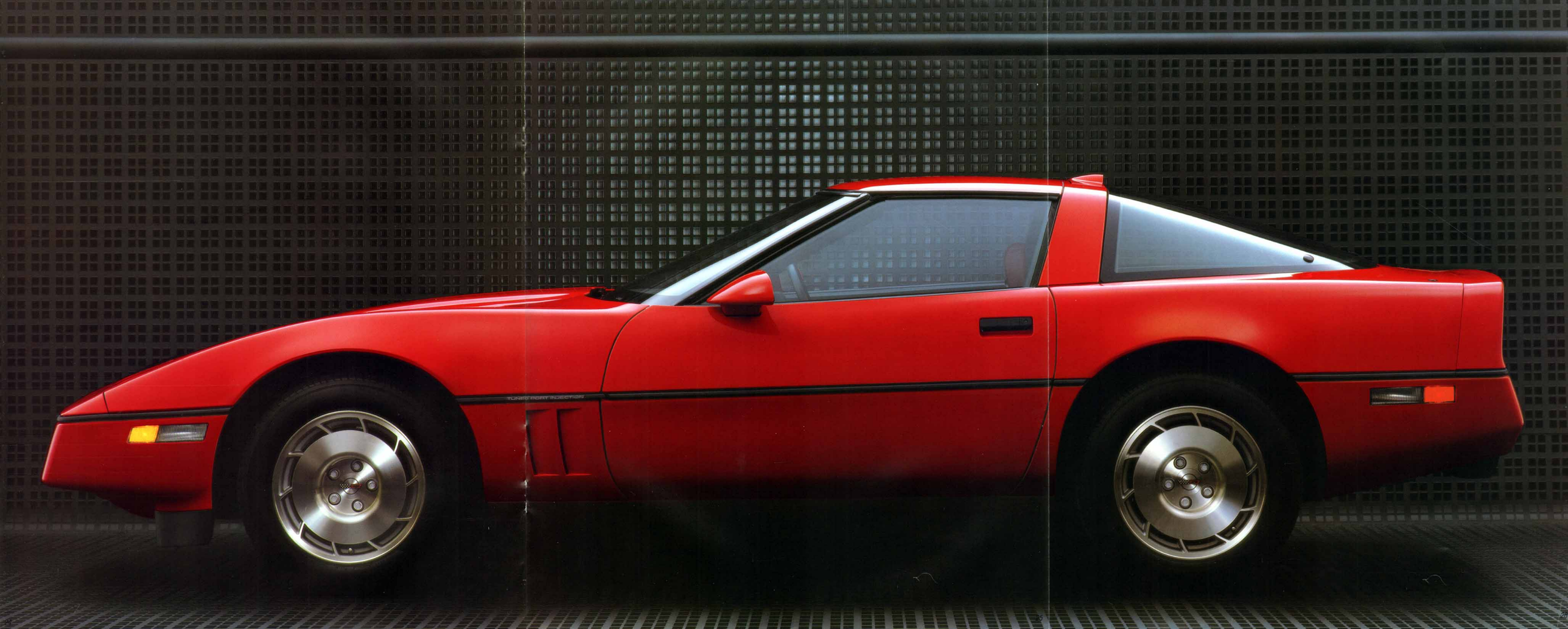
Unidirectional Goodyear Eagle P255/50VR-16 steel-belted radials are mounted on 16" x 8-1/2" aluminum alloy wheels.

The 1986 Corvette weighs 3,234 lbs. This means that when achieving a lateral acceleration of 0.91g,† or gravity force, the car is capable of staying on the road despite a sideways force of 3,000 lbs.

Corvette's 5.7 Liter TPI V8 engine, Goodyear P255/50VR-16 tires, four-wheel independent suspension and Bosch ABS II braking combine to produce quick acceleration and short stopping distances in most road conditions.

At every pylon in a slalom, the G-forces shift from one side to the other. Corvette's suspension controls the weight shifts, and ABS II allows use of the brakes halfway through a high-speed curve.


CORVETTE



Even before the shape was determined, the goal was clear.

Create a form that fully assimilates engineering mathematics with aesthetic values; that demonstrates, at one time, subtle brutality and sensitive balance; that clearly expresses the singular heritage and continuing purpose of the Corvette.

The stunning attainment of that objective is obvious in the palpable presence created by this vehicle. Line and nuance converge in a distinctive silhouette embodying the urgency of motion. The machine's snarling posture recalls performance and handling capabilities at a glance. Working harmoniously, all elements contribute to the formation of this three-dimensional sculpture. As a car celebrating excitement, Corvette remains, first and always, a work of art.

Like all good design, Corvette directs the eye to scan in definite sequence. The smooth contours of the refined bodywork. The aggressive quality of the crouching stance. The forward thrust of the wheel-oriented fuselage. The aerodynamic efficiency of the lowered nose. All in an expanding wedge that rises from front facia, over sweeping clamshell hood, past dramatically raked windshield and sloping roof line, to culminate in the sharp tail upper structure and four circular taillights that bespeak continuity with past Corvettes.

Note, too, the interplay of other elements. Integrated fog, front and rear cornering lamps. Hidden halogen headlights that tumble forward 162.5 degrees as they emerge. Frameless rear glass hatch. One-piece roof panel that lifts off to open Corvette to sun and stars.

All defined in an envelope with width sufficient to dominate, uninterrupted save for a single horizontal groove that houses the body side moldings while inviting the eye to follow the unbroken flow of the car.

A further word about ways in which Corvette design adapts the insights of aerodynamics and engineering.

As a bottom breather, the engine is cooled by air taken in beneath the nose of the vehicle. With the forward movement of the car pumping air to the radiator, the car leads with bumper only, presenting a small frontal area that contributes to the impressive 0.323 Cd. The high rear deck and integrated spoiler are similarly efficient, increasing downward pressure on the driven wheels, helping improve road adhesion and directional control. Vertical gill slashes located behind the front wheel cutouts reduce front-end lift while, at the same time, accenting the striding quality of Corvette's character and recalling the heritage of the vehicle with practical nostalgia and forceful grace.

Yet for all its refinement, Corvette styling is distinctly American, both in the exuberance of its appearance and the fact that our experience demands a measure of comfort and practicality be built into the car.

Accordingly, the package evolved from the inside outward, around the seating space for driver and passenger. In this total driving environment, segmented seat design supplies support in pressure areas, allowing the chairs to mold and conform to the contours of individual occupants. The application of sophisticated ergonomics integrates man with machine.

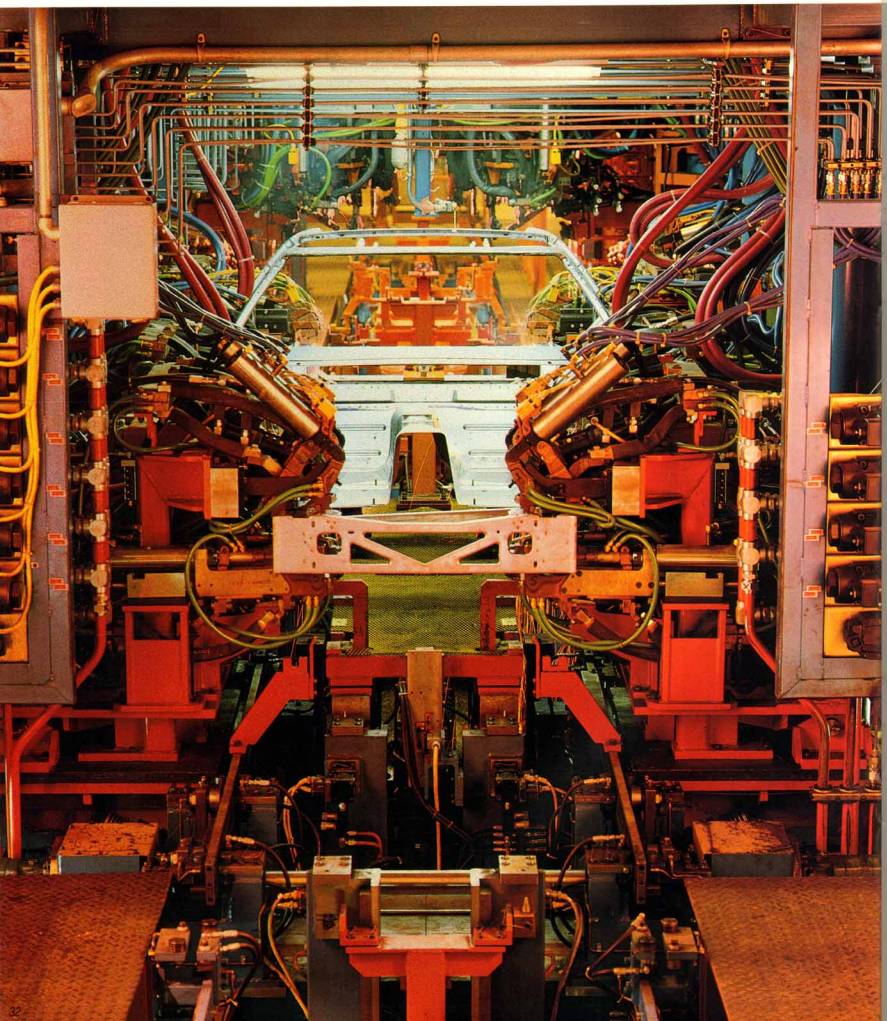
Recognizing that the cockpit is a mobile workplace, Corvette provides advanced driver information systems. Besides relaying essential data from the complete electronic communications center, liquid crystal displays fulfill another of the essential criterion by which one may determine the success of the design function—their technical nature expresses the special character of the age in which we live.

Above all, from every angle, Corvette is a car that begs to be driven. That fact, especially, testifies to the ultimate and successful marriage of form with function that has always been, and will continue to be, unmistakably Corvette.

Corvette celebrates the integration of engineering innovation with design excellence. Every line contributes meaningfully to the car's charisma, creating a shape that appears to stride forward even when it's standing stock still.

Corvette's ergonomically designed interior, furnished with available red leather seats, invites you to climb aboard.

The electronic instrument cluster displays 14 different readouts, keeping you in constant contact with ambient conditions.



From the V8 engine with Tuned-Port Injection to the computerized Bosch ABS II anti-lock braking system to the sleek fiberglass shell, the 1986 Corvette is a showcase of engineering technology. This revolution extends to the Corvette production line, where the quality of assembly is the most crucial concern.

The Bowling Green, Kentucky, facility is one of the world's most modern automotive assembly plants. It encompasses a million square feet—23 acres under one huge roof. Only one car is manufactured—Corvette. Just as outstanding as the complex itself are the people who work there. Each one—engineers, technicians, managers and assembly workers—is a dedicated craftsman, committed to excellence in the production of America's sports car.

The key to the Corvette assembly operation is precision. Precision made possible by a match check frame which serves as a full-size blueprint against which structural parts are checked to within minute tolerance limits. Precision delivered by a two-stage robot welder which builds the Corvette uniframe automatically, applying 142 welds in 97 seconds.

Similarly advanced techniques are applied to the production of Corvette's solid fiberglass body. These methodologies provide smooth beauty while computerized instruments measure body panels to specified tolerances on three planes.

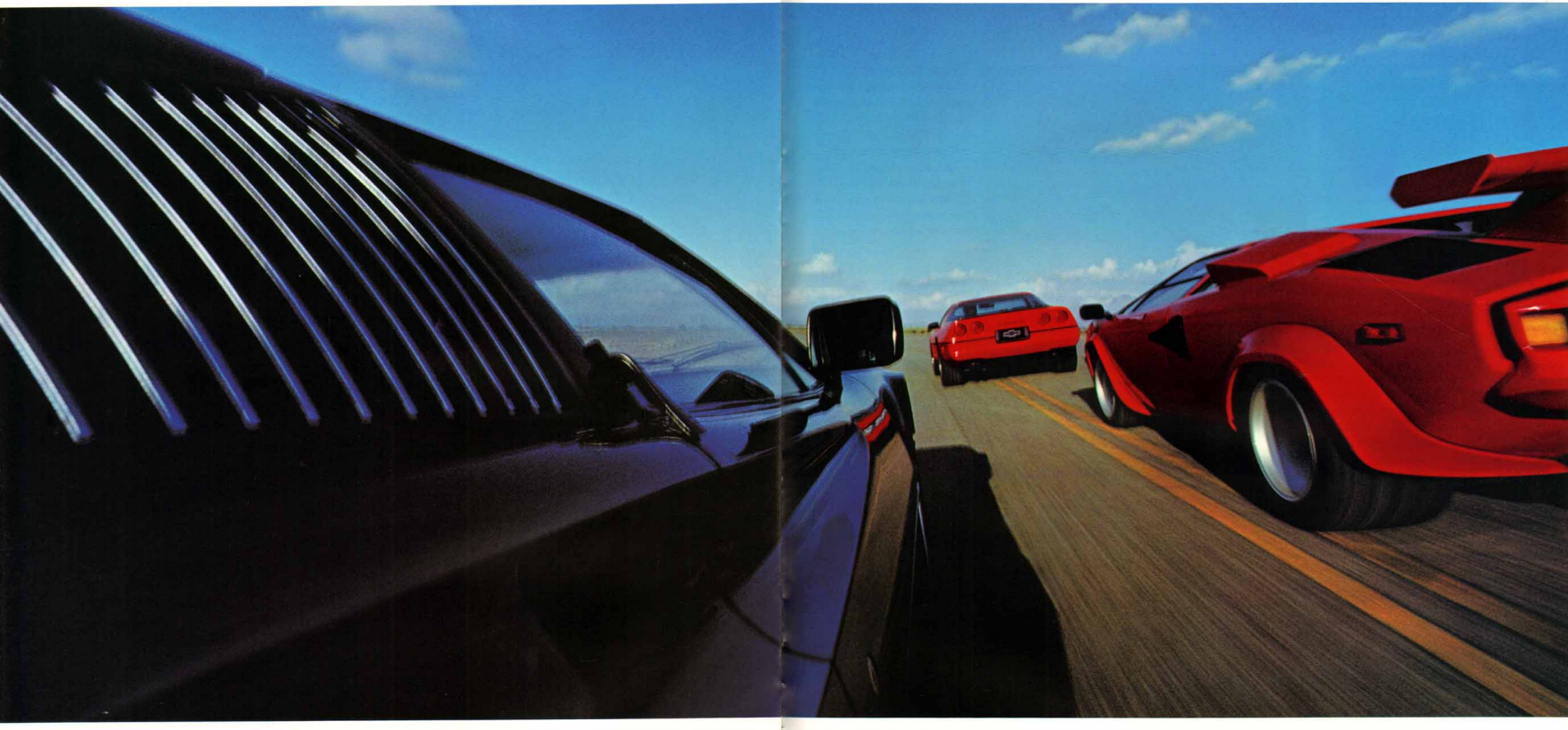
Then, the chassis, drive train and suspension are married to the body via a hydraulic "towveyer." This interlocking system is designed to assure that every contact point will have a perfect match.

To ensure such precision at all phases of assembly, the application of computer technology during Corvette production is among the highest in the industry. The alignment of suspension componentry is computer-measured. Computers are utilized for parts allocation, manpower distribution and inventory control. Computer-generated inspection tickets follow a new Corvette throughout the assembly process. Computer-controlled robot painters even apply Corvette's consistently thick and brilliant finish. Meticulous wet and hand sanding is part of the paint process as well.

In addition to this high level of technology, there's something else evident when one visits the Corvette assembly facility, something less quantifiable that sets the Corvette factory and its people apart. Perhaps it's the knowledge that each individual's work is being compared to the best the world has to offer. Certainly it's the commitment to excellence only men and women can make. Maybe it's good, old-fashioned American pride. In any case, it's clear there's affection for this car that goes beyond normal boundaries. In fact, several ongoing programs help keep Corvette quality high. For example, "The Morning Audit" brings salaried and hourly employes together to examine vehicles in detail and suggest quality improvements. After-work "Employee Awareness Groups" discuss procedures and conditions relating to production, keeping workers and the car they make in close contact. Then, four nights a week, rotating groups of employes take brand-new Corvettes home so they can experience what buyers of the vehicle do.

These are the kinds of efforts that are helping the Corvette team build the best production sports cars that advanced design and assembly methods can create.

Building the Corvette is a complicated and demanding process, requiring a complex integration of man with machines. A few important phases of the operation are shown here. Clockwise from facing page: A two-stage welder builds the uniframe. Computerized instruments measure body panels to close tolerances. Wet and hand sanding are part of paint application. Point-check inspection helps ensure that body panel assembly meets design intent.



USAC testing proves Corvette is fully competitive with much more expensive European exotics. Using an Olympic-style system, Corvette outscored the competition in a series of events.

USAC Testing: The Proof

Uniquely capable. Unabashedly American. Corvette has always been both. Now it's a whole lot more.

Comparative performance tests conducted by the United States Auto Club in January 1985 demonstrate that the new-generation Corvette is a world-class sports car.

The trials, run in accordance with strict USAC testing procedures, pitted a factory-stock 1985 Corvette against a Lamborghini Countach, Porsche 944, Ferrari 308 GTSi, Lotus Esprit Turbo and a Porsche 928S. Using an Olympic-style scoring system that awards six points to the winner of each event (the events were Acceleration, Braking, Slalom and Lateral Acceleration), Corvette was the victor, registering a total point score of 21. Perhaps even more significant, Corvette scored no fewer than four points in any event.

Thirty-three years ago Corvette first challenged the European sporting establishment by redefining the concept of "sports car." Now, the challenger is a champion—Corvette.

USAC COMPETITIVE RANK

	Corvette 1985	Lamborghini Countach	Porsche 944	Ferrari 308 GTSi	Lotus Esprit Turbo	Porsche 928S
Total Points	21	18	14	11	11	9
Acceleration 0-60 (sec.)	4 (6.00)	6 (5.33)	1 (7.95)	3 (6.43)	5 (5.95)	2 (6.66)
Braking 60-0 (ft.)	6 (129.2)	3 (135.7)	4 (135.2)	2 (143.1)	1 (144.7)	5 (135.1)
Slalom (sec.)	6 (6.13)	3 (6.38)	5 (6.33)	4 (6.36)	2 (6.40)	1 (6.62)
Lateral Acceleration (g's)	5 (.91)	6 (.92)	4 (.86)	2 (.83)	3 (.85)	1 (.82)
Price as Tested	$26,703	$103,700	$26,121	$60,370	$50,384	$49,495

Scoring based on an Olympic system in which first place is awarded 6 points for each event. USAC certified tests, January 1985. All cars listed were latest models available for sale in the U.S. at time of testing and were equipped with various high-performance options. Corvette's Manufacturer's Suggested Retail Base Price for the 1985 Corvette was $24,891 including dealer prep. Tax, license, destination charges and optional equipment additional.

Corvette's comprehensive list of standard features includes items that are optional or not available on competitive sports cars costing much more. Whether it's working at the limit in sanctioned competition or cruising proudly through town, a distinguished combination of functional luxury and race-car performance has been achieved.

Air Conditioning

A perfect driving environment is the goal. In addition to standard air conditioning, every Corvette is equipped with tinted glass, power windows, side window defoggers and convenient driver-side, door-mounted windshield wiper and washer controls.

Retractable Headlamps

During daylight hours the retractable lamps are hidden beneath the low, sleek hood line. At night they flip forward 162.5 degrees, preserving the aerodynamic shape of Corvette.

Anti-Theft Features

The core of the sophisticated Vehicle Anti-Theft System (VATS) is a special module with a resistor decoder and an ignition key with a pellet of specified resistance. Other equipment includes a special starter relay and a new lock cylinder.

When the key is placed in the ignition, lock cylinder contacts "interrogate" the resistance. The VATS module then decodes the key and, if compatible, closes the starter relay, which in turn allows you to start the car.

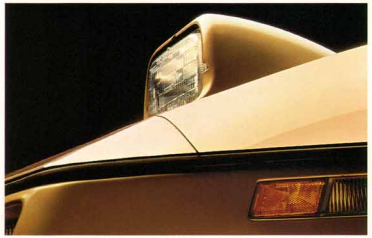
Code information cannot be retrieved from the VATS module with even the most sophisticated electronic techniques.

An anti-theft horn alarm circuit with starter interrupt is also standard on every 1986 Corvette.

Anti-Lock Brakes

New for 1986, Bosch ABS II uses an electronic sensor to monitor rates of wheel rotation during braking. If a wheel begins to lock up, the control unit releases braking pressure briefly, then reapplies it when traction is regained.

Corvette's air conditioning allows you to maintain a perfect driving environment.



Retractable headlamps flip forward 162.5 degrees from beneath the hood.

VATS employs a decoder and ignition key with a pellet of specified resistance.

Goodyear Eagle GT P255/50VR-16 unidirectional radial tires.

The removable one-piece roof lift-off panel stores in a lock-down position in the rear compartment, opening Corvette up to sun and stars.

Goodyear 50VR Tires

The standard tire and wheel combination features P255/50VR-16 Goodyear unidirectional steel-belted radial tires mounted on 16"x 8-1/2" aluminum alloy wheels with functional turbine-blade design and anti-theft nuts.

Roof Panel Storage

The removable one-piece roof panel combines the security of a closed car with the exhilarating effects of an open roadster. There is no T-bar. The roof is removed using a ratchet wrench designed for this application. The panel may then be stored within the car in a lock-down position in the rear compartment.

Halogen Fog Lamps

The integral halogen fog lamps make driving under adverse conditions easier. Operation is independent of the headlamps.

Standard Seat

The high-back cloth bucket seats are contoured to provide the feeling of individualized fit and comfort. Manual back angle adjustment is offered. Other interior features include a leather-wrapped steering wheel, dual rear lockable storage compartments, lighted visor vanity mirror.

Tilt/Telescopic Steering Wheel

Corvette adjusts to your driving style with a steering wheel that tilts and telescopes.

4-Speed Automatic Transmission

Four-speed automatic overdrive transmission with lockup torque converter contributes to impressive performance plus low-RPM highway cruising.

4-Speed Manual Transmission

If you prefer, choose the smooth-shifting manual 4-speed, with an electronic automatic overdrive feature in 2nd, 3rd and 4th gear, which is optional at no extra cost. Gear ratios are chosen to deliver exceptional performance.

Corvette News

A three-year complimentary subscription goes to every Corvette buyer.

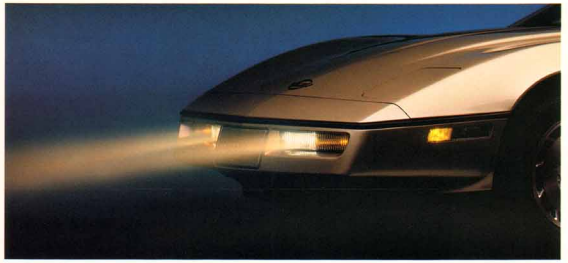
CORVETTE SAFETY FEATURES

Occupant Protection

- Manual lap/shoulder belts for driver and passenger (driver's side includes visual and audible warning system)
- Energy-absorbing steering column
- Energy-absorbing instrument panel
- Energy-absorbing front seat-back tops
- Laminated safety windshield glass and tempered safety side and rear window glass
- Safety interlocking door latches
- Passenger-guard inside door lock handles
- Safety armrests
- Integral head restraints, driver and right front passenger.

The four-speed manual with electronic overdrive is available at no extra cost.

The four-speed automatic overdrive with lock-up torque converter is standard.



Halogen fog lamps facilitate vehicle operation in inclement weather.

Aircraft-cockpit-style high-back contour seats with manual back adjustments and bolsters to provide side support are upholstered in attractive cloth.

The steering wheel tilts and telescopes to your personal specifications.

Accident Avoidance

- Side marker lights and reflectors
- Parking lamps that illuminate with headlamps
- Four-way hazard warning flasher
- Backup lights
- Center high-mounted stop lamp
- Directional signal control with lane-change feature
- Windshield and side window defroster, windshield defroster and washer and dual-speed wipers
- Inside rearview mirror with vinyl-bonded glass
- Dual electric remote outside rearview mirrors, convex on right-hand side
- Anti-lock brake system with dual master cylinder and warning lights
- Starter safety switch
- Low-glare finish on instrument panel top, inside windshield moldings, wiper arm/blades, metallic steering wheel surfaces
- Illuminated heater and defroster controls
- Illuminated wiper controls on driver's door
- Tires with built-in tread wear indicators.

Theft Deterrence

- Audible reminder for ignition key removal
- Theft-deterrent steering column lock
- Visible vehicle identification number
- Vehicle Anti-Theft System (VATS)
- Audio alarm system with starter-interrupt feature
- Locking roof panel with theft-deterrent mount
- Theft-deterrent wheel lugs.

See the Comprehensive Features Index inside the back cover for a complete list of standards.

Leather Sport seats include six-way power adjustments.

Tailor Corvette to your personal specifications by selecting optional equipment. The long list of available features, all designed to make the Corvette experience even more rewarding, includes:

Z51 Performance Handling Package

For the true enthusiast, the Z51 package features 16" x 9-1/2" wheels, higher rated monoleaf fiberglass springs, Delco/Bilstein gas-pressurized shock absorbers, stabilizer bars and selected control-arm bushings, a quicker steering gear and heavy-duty cooling.

Delco/Bilstein Shocks

A gas-charged Bilstein shock at each wheel contributes to a comfortable ride while enhancing the precise handling characteristics for which Corvette is famous. Available with base and standard on Z51 suspensions.

Heavy-Duty Cooling Equipment

These items, which are available separately, include an auxiliary cooling fan, engine oil cooler and heavy-duty radiator. They are designed to provide additional cooling capacity during extended high-speed or competition driving. Standard with Z51 Performance Handling Package.

Leather Seat Trim

Leather may be specified as the covering on standard Corvette seats.

Leather Sport Seats

The sport seat is trimmed in genuine leather and features power adjustments of upper side bolsters, lumbar support and back-angle adjustment. A six-way power driver's seat is also available for either standard or sport seats.

Electronic Speed Control

Electronic speed control includes a convenient resume-speed feature and a speed adjustment that allows you to change your speed in precise one-MPH intervals. Available with both 4-speed and automatic transmissions.

Delco/Bilstein gas-filled shock absorbers contribute to ride and handling.

Electronic speed control includes a handy resume feature.

New electronic air conditioning features fingertip push-button control.

Electronic Air Conditioning

This new optional electronic-control air conditioning complements Corvette's sophisticated instrument displays. The system features easy-to-use color-coded push buttons and a digital temperature control. Once set, the temperature is automatically maintained. An available display registers outside air temperature, helping you monitor ambient weather and road conditions. (Interim availability. See dealer for details.)

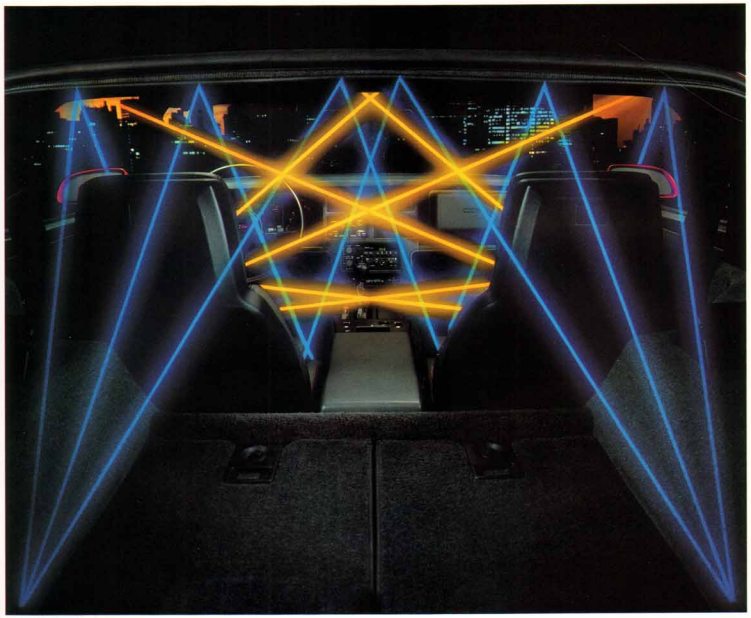
Delco/Bose Sound System for Music That's Tuned to Your Corvette

The Delco/Bose stereo, available only as a factory option in the 1986 Corvette, offers sound so real that it's been rated by experts as the best stereo system available in a production automobile. Delco/Bose performance rivals the most expensive home stereos, because it is tailored exactly to the acoustics of Corvette.

The Delco-GM/Bose Music System is composed of a receiver and four bass reflex amplifier/speaker enclosures engineered specifically for window placement, angle and density of glass, seating position and cockpit configuration. Even the textural composition of the upholstery and carpeting were considered. Each speaker has its own built-in equalizer network.

Other features of the system include: AM/FM stereo reception with automatic adjustment. Circuits adjust reception, assuring maximum sensitivity to weak stations without danger of overload on strong signals. Electronic tuning with seek and scan features. Seek button changes stations electronically. Scan button automatically samples all clear radio signals for five seconds each. Digital VF (Vacuum Fluorescent) readouts of time or radio frequency are featured. Dynamic Noise Reduction (DNR™) and Dolby® Sound Noise Reduction. Reduces high-frequency "hiss" on AM, FM and cassette tape. The integral tape player features auto-reverse and music search features. Also: 100 watts of power. Four separate speaker enclosures. Separate treble and bass controls. Computer-balanced, wrap-around sound.

"Dolby" is a registered trademark of Dolby Laboratories.



Delco-GM/Bose Music System.

See the Comprehensive Features Index inside the back cover for a complete list of options.


BFGoodrich
SCCA
CALIF. CHEVROLET Dealers
RAINES
Chevrolet
GT
84
SCCA
BELLI
CIBIE
SIMPSON
GOODYEAR
RED LINE OIL
41
R.C.G. RACING
SCCA
92
GT
ROAD & TRACK
CIBIE
GOODYEAR
SCCA
RED LINE OIL
5
GT
Florida

Ron Kleeman freely admits all his work over the past 20 years displays a strong sense of masculinity. Race cars, trucks, airplanes, engines—he reproduces these powerful symbols with a hard-edged style and technique. As a realist painter, Kleeman recreates real-life images. He compares himself to a filmmaker—working without a movie camera—continually creating visual situations in his mind. Unlike the filmmaker, Kleeman's finished product has only one frame. The painting of Corvettes in Showroom Stock GT competition is his impression of a dramatic wheel-to-wheel showdown he witnessed.

PHOTO COURTESY PETE BIRO

Corvette Excels in Showroom Stock GT Racing, Continuing a 30-Year Tradition. Showroom Stock GT class racing puts production-line Corvettes to the endurance test. Sanctioned by the Sports Car Club of America (SCCA), Showroom Stock racing is rapidly emerging as the premier form of sports car competition across the United States. Again and again, Chevrolet Corvette is the car to beat.

But then, capturing checkered flags is a long-running Corvette tradition. Step one was the installation of the soon-to-be-famous small-block V8 into the '55; the engineers now had a genuinely powerful street car. It must have served as an inspiration, because from then on, they really went to work.

More purposeful bodywork arrived for '56, and with it a whole host of engineering modifications that gave some highly respected European manufacturers real cause for concern. The list of improvements included a 225-HP engine option featuring dual four-barrel carburetors, a close-ratio 3-speed manual transmission and a recalibrated suspension. Suddenly, "Power-Pack" Corvettes were competing successfully at Sebring, setting speed records at Daytona and consistently winning in SCCA-sponsored road races.

Road racing circa 1962. A '57 chases two '62 Corvettes into a tight corner. The heart of the 1962 Corvette performance package was a 327-cubic-inch small-block V8 with fuel injection and a close-ratio 4-speed manual transmission.

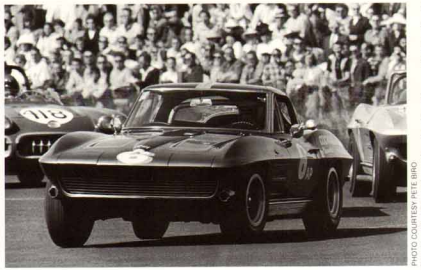


PHOTO COURTESY PETE BIRO

The 1963 Sting Ray, with its innovative four-wheel independent suspension, was a bold step forward in Corvette racing technology. In this '63 race, a new "split-window" coupe accelerates out of a turn with 1963 and 1960 roadsters in pursuit.

1957 was a year to remember. Important new options included a fuel-injected 283-cubic-inch V8, a 4-speed manual transmission and a factory-installed competition package that made this production sports car literally race-ready. That same year, the factory also unleashed specially modified experimental racers with styling and performance features that would influence future Corvettes.

The improvements to the production Corvette—front and rear anti-sway bars, metallic brake linings—kept coming in the late 1950s, and so did the SCCA championship titles.

Significantly, the modifications that put Corvette in the winner's circle were also making it a better all-around sports car. A perfect example is the 1963 Sting Ray, which was inspired by a late-Fifties experimental Corvette race car of the same name. Four-wheel independent suspension helped make this new Corvette appreciably faster around the racetrack and improved everyday ride/handling at the same time.

Big-block power came to Corvette in the late 1960s, culminating in the massive and hugely successful 427-cubic-inch racing motor of 1967–1969. On the street or track, these Corvettes were fast yet surprisingly tractable machines. Not surprisingly, Corvette kept winning races. In 1969 Corvette set lap records at Le Mans and Nurburgring, placed first at a Daytona sports car race, took second in the Tour de France, and as usual, won several SCCA divisional championships at home.

These Corvettes were unquestionably right for their times—a look at current collector values says a lot about the timelessness of Corvette—but the quest for efficiency has made today's model the most balanced, perhaps the best Corvette yet. The 1985 model's spectacular performance in Showroom Stock GT racing proves that Corvette is still the car to beat.

Remember, these are production cars competing in a series of 6-, 12- and 24-hour endurance races. "The Sports Car Club of America has very strict rules governing what you can and cannot do to a car entered in the showroom stock categories," explains Corvette race driver Ron Grable. "Basically, if you take out the roll cage and safety equipment and peel the decals off the race car, you should have a vehicle that is very, very close to what's sold in the dealer's showroom."

And this is racing that spectators can really relate to, with demanding twist-and-turn, speed-and-slow road course competition that will bring out any weaknesses in an automobile—fast. Says SCCA national showroom stock champion Don Knowles, "You're looking at an event that's measured in hours, rather than minutes." To win consistently in these extreme tests of performance capabilities, a car's got to be good.

So far, the current-generation Corvette (1984 and 1985 model years) has dominated showroom stock competition, competing against the likes of Porsche 944, Porsche 944 Turbo and the Maserati Biturbo.

With advances like Bosch ABS II anti-lock brakes and a refined Z51 optional Performance Handling Package, Corvette teams are looking forward to another very good year in 1986.

After all, there is a tradition to uphold.

PHOTO COURTESY PETE BIRO

Corvette has long been a respected competitor on the international racing circuit, running against some of the world's most exotic full-race automobiles. Here, a 427-powered '69 Sting Ray is in action at Le Mans, France.

The future of Corvette competition is here today. Chevrolet's GTP Corvette, a mid-engine racer, made its debut at Elkhart Lake during the 1985 season in IMSA's prototype class. Like its predecessors on the circuit, the on-track experience of the GTP Corvette will be turned into viable applications for future products.

Important: A Word About This Catalog.
We have tried to make this catalog as comprehensive and factual as possible. However, since the time of printing, some of the information may have been updated. Also, some of the equipment shown or described throughout this catalog is available at extra cost. Your dealer has details and, before ordering, you should ask him to bring you up to date. The right is reserved to make changes at any time, without notice, in prices, colors, materials, equipment, specifications and models. Check with your Chevrolet dealer for complete information.

A Word About Engines.
Chevrolets are equipped with engines produced at facilities operated by GM car groups, subsidiaries or affiliated companies [illegible]

A Word About Updated Service Information.
Chevrolet regularly [illegible] its dealers useful service bulletins about Chevrolet products. Chevrolet [illegible] We have [illegible] acts better [illegible] too. Ask your [illegible] tion, call toll-free 1-[illegible]-4123.

Let's Get It Together... Buckle Up.
Every new 1986 Chevrolet [illegible] by a Chevrolet dealer in the United States [illegible] a one-year, $10,000 safety belt user insurance certificate from MIC General Insurance Corporation at no additional charge. $10,000 will be paid to the estate of any occupant who suffers fatal injuries as a result of an accident involving that vehicle while wearing a GM safety belt. Buckle up every time you drive.

A Word About Assembly, Components and Optional Equipment in This Chevrolet.
The Chevrolet described in this catalog is assembled at a facility operated by General Motors. The vehicle incorporates thousands of different components produced by car groups and by various component divisions of General Motors and by various suppliers worldwide to General Motors. From time to time during the manufacturing process, it may be necessary, in order to meet public demand for particular [illegible] equipment, or to meet federally mandated [illegible] safety and fuel economy requirements, [illegible] other reasons, to produce Chevrolet products [illegible] different components or differently sourced components than initially [illegible] been [illegible] and will [illegible] ociated with [illegible]

With respect to [illegible]-cost optional equipment, make certain you specify the type of equipment you desire on your vehicle when [illegible] from your dealer. Some options may be unavailable when your car is built. Your dealer receives advice regarding current availability of options. You may ask the dealer for this information. GM also requests the dealer to advise you if an option you ordered is unavailable. We suggest that you verify that your car includes optional equipment you ordered or, if there are changes, that they are acceptable to you.

Commitment to Excellence
Chevrolet enhances your ownership experience with its "Commitment to Excellence," a customer satisfaction program that brings you an extensive system of services and benefits. The program includes:

- Vehicle identification cards to speed your service at the dealership.
- Special rates and reservation service at participating hotels, motels and car rental agencies.
- Hotel/motel and car rental guides.
- Preregistered key return service.
- A "Let's Talk" booklet of service signals.
- A glove compartment organizer.
- A delivery procedure that includes an inspection checklist and orientation drive.

Chevrolet's "Commitment to Excellence" is another way Chevrolet takes care of you for as long as you own your car.

At your Chevy dealer's, financing or leasing your new Corvette can be as easy as saying GMAC.

GM

CTHG IN U.S.A. 6/86 SEPTEMBER 1985

Corvette colors are carefully chosen and painstakingly applied. The fully automated paint system is one of the most advanced in the world. The entire paint operation is contained in a dust-free clean-room environment in which air pressure is maintained positive to keep foreign airborne contaminants out. Base coat/clear coat enamels are applied in a four-step process that results in vibrant finishes that display a deep, penetrating shine.

Silver Metallic

Medium Gray Metallic

Medium Blue Metallic

Yellow

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Silver Metallic

Medium Gray Metallic

Medium Blue Metallic

Yellow

White

Black

Gold Metallic

Silver Beige Metallic

Copper Metallic

Medium Brown Metallic

Dark Red Metallic

Bright Red

Silver Metallic/Medium Gray Metallic

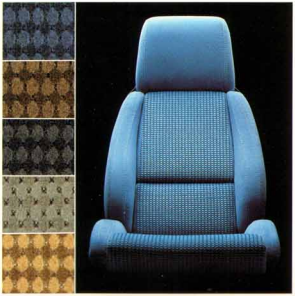
White/Silver Metallic

Medium Gray Metallic/Black

Silver Beige Metallic/
Medium Brown Metallic

The care and quality that characterize Corvette are evident in the richness of the fabrics. Choose the standard cloth, optional leather or ultimate optional leather adjustable Sport buckets and rediscover a finely crafted environment every time you drive.

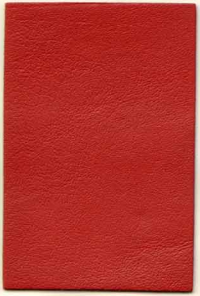
Standard reclining seats feature integral head restraints and wool-pad comfort liner. Cloth upholstery is standard; leather is available.



Blue, Bronze, Graphite, Gray, Saddle, Red (available in leather only).

The optional adjustable Sport seats, which include integral head restraints and wool-pad comfort liner, are biomechanical support systems designed to cradle the human body. These fine seats are available in leather only. Both driver and passenger seats feature power adjustments in lumbar, backrest, and bolster areas, to provide a high degree of adaptability to practically every human form.

Blue, Bronze, Graphite, Gray, Red, Saddle.



STANDARD FEATURES

Power Team/Chassis/Mechanical

- Aluminum intake plenum, tuned crossover runner manifold
- Automatic transmission with overdrive fourth gear
- Cast alloy aluminum wheels, steel compact spare
- Center high-mounted stop lamp
- Computer Command Control
- Delco Freedom Plus II battery with sealed side terminals
- Electric engine coolant fan
- Electric in-tank, positive-displacement roller-vane fuel pump
- Exclusive monoleaf glass-epoxy composite transverse front and rear springs
- Forged aluminum front and rear suspension arms
- Full independent four-wheel suspension
- High Energy Ignition system
- Hydraulic valve lifters and exhaust valve rotators
- Limited-slip differential
- Magnesium engine valve covers
- Poly-vee single-belt engine accessory drive belt
- Power anti-lock disc brakes at all four wheels with 11.5'' rotors and finned aluminum calipers
- Power rack-and-pinion steering
- P255/50VR-16 steel-belted radial ply blackwall tires (Goodyear Eagle VR50)
- Side lift jack
- Stainless steel exhaust manifolds and free-flow mufflers
- Sturdy uniframe body structure 100% galvanized and dip-painted
- Vehicle anti-theft system with encoded key
- 5.7 Liter TPI (Tuned-Port Fuel Injection) V8 engine

Exterior

- Automatic power antenna
- Body-color front and rear soft facia with integral front air dam
- Concealed wipers with integral washers in wiper arms
- Corrosion-resistant fiberglass body panels
- Designed-in body side molding
- Dual electric remote-controlled sport mirrors
- Dual quartz-halogen fog lamps in grille opening
- Energy-absorbing bumper systems
- Frameless rear hatch glass with three remote releases
- Front cornering lamps; rear cornering lamps
- Front fender louvers
- Full-tilting clamshell-type hood
- Power-operated quartz-halogen retractable headlamps
- Single removable roof panel
- Tinted and flush-mounted glass

Interior

- Acoustical insulation package
- Air conditioning
- Center console with shifter, coin tray, cigarette lighter and ashtray; power window, radio, air conditioning controls, electric mirror controls and override switch for 4-speed manual transmission
- Contour cloth bucket seats with lateral support and back-angle adjustment
- Day/night rearview mirror with integral map lamps
- Deep-twist floor and stowage area carpet
- Driver information system. Includes instant MPH, average MPG and range in digital readouts
- AM/FM ETR™ stereo radio w/seek and scan digital clock and four speakers*
- Headlamp-on reminder
- High-intensity interior lamps on door side-wall and "B" pillar
- Illuminated RH visor vanity mirror
- Intermittent windshield wipers
- Leather-wrapped steering wheel rim
- Luggage compartment concealment roller shade
- Manual inside hood release
- Power windows
- Rear underfloor storage compartments (2)
- Side window defogger
- Soft-padded and carpeted door panels
- Tilt-Telescopic steering wheel
- Twin underhood lamps
- Ultracontemporary instrument panel featuring electronic liquid-crystal instrumentation with multi-colored analog and digital display. Readouts include: speedometer, 6,000-RPM tachometer, fuel level, oil pressure, oil temperature, voltmeter. Conventional readouts for odometer, turn signals and high-beam headlamps
- Underdash courtesy lamps

*May be deleted for credit.

OPTIONAL FEATURES

(Available at extra cost)

Factory-Installed Optional Equipment

- Air Conditioning, Electronic Control
- Axle: Performance ratio (automatic transmission only)
- Cooler, Oil
- Defogger System. Includes rear window defogger and heated outside rearview mirrors
- Door Lock System, Power
- Paint, Custom Two-Tone
- Radiator Cooling Boost Fan
- Radiator, Heavy-Duty
- Radio Equipment, GM-Delco: Electronically tuned AM/FM stereo radio w/seek and scan, cassette tape and digital clock. Includes power antenna

Delco-GM/Bose Music System, electronically tuned AM/FM stereo w/seek and scan, cassette tape and digital clock. Radio Delete (for credit; deletes std. radio and speakers)

- Roof Panels:

Blue Tint, Transparent Lift-Off
Bronze Tint, Transparent Lift-Off
Dual Removable

- Seat Equipment:

Leather reclining bucket seat with integral head restraint.
Seat, Power, Six-Way. Driver's side.
Leather reclining Sport bucket

- Speed Control, Electronic. With resume speed
- Suspension Equipment: Z51 Performance Handling Package. Includes Delco/Bilstein shocks, P255/50VR-16 tires, selected special lower control arm bushings, heavy-duty front and rear springs and stabilizer bars, fast-ratio steering—13:1; engine oil cooler, heavy-duty cooling, radiator boost fan and 16'' x 9-1/2'' wheels, front and rear
- Shock Absorbers: Delco/Bilstein
- Transmission: 4-speed manual with overdrive*

*No-cost option.

Dealer-Installed Accessories

Cloth, Polishing

Compass

Guard, Splash

Lamp, Spotlight

Warranty Information

(See reverse side.)

CORVETTE OWNER PROTECTION

A very thorough owner protection program for 36 months or 36,000 miles.

The Corvette owner will be given an exceptional protection program.

Here Are the Highlights:

For the first year, or those all-important first 12,000 miles, whichever comes first, you get this broad protection. Any repairs or needed adjustments to correct defects in materials or workmanship are covered, except tires. Your Chevrolet dealer will make such repairs or adjustments at no charge.

Upon expiration of the 12-month/12,000-mile coverage, the New Car Limited Warranty continues to cover engine and other powertrain components for up to 36 months or 36,000 miles, whichever comes first.

Broad Coverage

These two warranties are enhanced by a third limited warranty which provides coverage for 36 months or 36,000 miles of vehicle usage, whichever comes first.

This third layer of coverage wraps around the first two layers and covers the entire vehicle except for normal service and maintenance items and the items listed in the Plan Agreement Folder.

Your Personal ID Card and Toll-Free Number

You'll receive a personal Identification Card which lists a toll-free number to call in the event of a breakdown. Whenever you are unable to contact your dealer, you can report trouble by calling between 8:00 a.m. and 5:00 p.m. (local time) any day, including weekends. You'll get service instructions on what to do and the dealer service locations nearest you.

Towing and Road Service Allowance

During the first 12 months/12,000 miles, an allowance of up to $35 is provided for the cost of towing or road service for any disablement of your Corvette. This includes such causes as running out of fuel, flat tire, dead battery and lost keys.

After the first 12 months/12,000 miles and until expiration of your 36/36 protection, the allowance applies when disablement is caused by a failure of a covered part.

Rental-Expense Provision

A rental car allowance is provided if:

(1) During the Agreement Term, repairs to your car, caused by a failure, require that it be kept in a repair shop overnight; or

(2) During the 12-month/12,000-mile New Vehicle Limited Warranty period, repairs to your car are covered by this warranty, and it is inoperable and must be kept in a repair shop overnight.

Small Deductible

After the first 12 months/12,000 miles, there is a small deductible of only $25 per covered repair visit.

Prompt Claims Handling

There is no red tape. The repairing dealer will be paid by check. So you can count on fast, smooth and efficient claims handling.

Your Chevrolet dealer has the complete details on this exceptional coverage for this world-class sports car. A Corvette owner is assured even greater satisfaction from a product that has been designed and built with the utmost care to the highest standards. You will benefit substantially from the long-range protection from major repair bills and from the even broader coverage in those important first months of ownership. The 1986 Corvette, a world-class sports car, is worthy of the finest all-around owner protection we can provide.

Engine

5.7 Liter (350 Cu. In.) V8 with Tuned-Port Fuel Injection
Block: Cast iron alloy
Pistons: Impacted cast aluminum
Camshaft: Cast iron alloy
Bore: 4.00" Stroke: 3.48"
Horsepower: 230 net @ 4,000 RPM
Torque: 330 lb.-ft. @ 3,200 RPM
Recommended Fuel: Unleaded
Fuel Anti-knock Index $\frac{(R+M)}{2}$: 87
Oil Filter System: Full flow
Crankcase Capacity (qt.): 4 (less filter)
Air Cleaner Type: Replaceable paper element, outside air pickup for cool, dense cylinder charge
Fuel Pump: Electric (in tank)
Fuel Tank Capacity (in gallons): 20
Exhaust System: Dual

Transmissions

Standard 4-speed automatic with overdrive and high-stall torque converter.
RATIOS:
1st: 3.06:1
2nd: 1.63:1
3rd: 1.00:1
4th: 0.70:1
No-cost-option 4-speed manual with computer-controlled overdrive in 2nd, 3rd and 4th gears.
RATIOS:
1st: 2.88:1
2nd: 1.91 direct; 1.30 overdrive
3rd: 1.34 direct; 0.91 overdrive
4th: 1.00 direct; 0.60 overdrive
(0.68 overdrive with Z51 Performance Handling Package)
AXLE RATIOS:
Automatic: 2.59:1 (std.); 3.07:1 (opt.)
Manual: 3.07:1 (std.)

Suspension—General

SHOCK ABSORBERS (front and rear)
TYPE: Base—Direct, double-acting hydraulic with pliacell expansion bags,
Optional—gas pressurized.
MAKE: Base—Delco
Optional—Bilstein

Suspension—Front

TYPE AND DESCRIPTION
Independent, forged aluminum upper and lower control arms and steering knuckle, transverse monoleaf spring and steel stabilizer, spindle offset.
Spring Type and Material: Monoleaf, filament-wound glass-epoxy composite.

Suspension—Back

TYPE AND DESCRIPTION
Independent 5-link design with toe and camber adjustment, forged aluminum control arms, knuckles and struts; transverse monoleaf spring steel tie rods and stabilizer. Tubular U-jointed drive shafts.
Spring Type and Material: Monoleaf, filament-wound glass-epoxy composite.

Brakes

DESCRIPTION
Aluminum caliper with nodular iron reaction bracket; pad reaction through bracket. Self-adjusting.
TYPE
Front: Disc with sliding-head caliper, low drag.
Rear: Disc with sliding-head caliper, low drag.
Special Valving: Proportioning—integral with master cylinder.
Power Brakes: Standard.
Anti-Lock System: Electronic 4-wheel, 3-channel (standard).
Effective Area cm² (in²): 174.0 (27.0) front; 117.9 (18.3) rear.
Gross Lining Area cm² (in²): 174.0 (27.0) front; 117.9 (18.3) rear.
Swept Area cm² (in²): 622 (96.5) front; 565 (87.5) rear.
Rotors, Outer Diameter: 11.5"

Tires and Wheels—Standard

TIRES
Size (load range, ply): P255/50VR-16 B/W.
Type: High-speed steel-belted radial Eagle VR50 unidirectional (Goodyear).
Inflation Pressure (cold) for Max. Vehicle Load: 35 front and rear (PSI).
WHEELS
Type and Material: Left-right aluminum alloy road wheels with specific vent design.
Rim (size and flange type): 16 x 8.5 front; 16 x 8.5 rear.
ATTACHMENT
Type (bolt or stud): Stud.
Number and Size: Five hex nuts, one anti-theft.
Spare: P155/80D-16; 16 x 4 steel wheel.
Position: Horizontal under fuel tank.
TIRES AND WHEELS (optional Z51 Performance Handling Package)
Size (load range, ply): P255/50VR-16 B/W.
Type: High-speed steel-belted radial Eagle VR50 unidirectional (Goodyear).
Wheel (type and material): Left-right aluminum alloy road wheels with specific vent design.
*Rim (size and flange type): 16 x 9.5 front; 16 x 9.5 rear.**
Spare Tire and Wheel: T155/80D-16 (aluminum 16 x 4 wheel with Power Seat Option RPO AG9).

Steering

Power: Standard.
Adjustable Steering Wheel: (Standard) Black-leather-wrapped two-spoke steering wheel; Tilt and Telescopic.
Turning Diameter: 40.4 ft.
Steering Type: Alloy rack-and-pinion.
Overall Ratio: 15.5:1 base;
13.0:1 Z51 Handling Package.

Electrical—Supply System

BATTERY
Make: Delco
Model: 75-630
Voltage: 12 volts
Amps at 0°F Cold Crank: 630 cold-cranking amps (CCA)
Minutes, Reserve Capacity: 90
Location: Engine compartment directly behind left wheel opening.
ALTERNATOR
Type and Rating: 105 amps.

(Continued other side.)

Electrical—Starting System

STARTER MOTOR

Current Drain at 0°F: 350 amps.

Electrical—Ignition System.

Type: High Energy Ignition.

Coil: Integral with distributor.

SPARK PLUG

Make: AC

Model: R43CTS

Gap: .81 (0.035)

Body

STRUCTURE

Integral perimeter-frame birdcage forms unitized body structure.

ANTI-CORROSION TREATMENT

All-encompassing corrosion protection including extensive use of aluminum; galvanization; use of specially treated fasteners; austenitic stainless steel or specially coated brackets, clamps, clips and braces; use of aluminized steel.

MISCELLANEOUS INFORMATION

Type of Finish: High-solids acrylic enamel with final clear coat.

HOOD

Hinge Location: Front.

Type: Hinged clamshell hood.

Hatchback Lid: Features dual gas struts, electric release (each door and console glove box).

Frame

All-welded steel-body-frame construction, 100% galvanized.

Dimensions and Weights

EXTERIOR

Width: 71.0"

Front Tread: 59.6"

Rear Tread: 60.4"

Wheelbase: 96.2"

Overall Length: 176.5"

Height: 46.4"

Minimum ground clearance: 4.7"

INTERIOR

Head Room: 36.5"

Leg Room: 42.6"

Shoulder Room: 54.1"

Hip Room: 49.3"

Cargo Volume: 17.9"

Curb Weight:

4-speed manual: 3,234 lbs.;

Automatic: 3,239 lbs.

Includes standard equipment as designed with oils, lube, coolant and 20-gallon fuel tank filled to capacity.

**Tire chains should not be used with 9½-inch rear wheels because they may cause damage to this vehicle.*

Suspension I—Componentry

At bottom, the suspension is a weight and energy management system. It must produce consistent reactions in circumstances that constantly change. It must transmit the weight of the car to the wheels, but must assure that shifts in the center of gravity/weight do not overwhelm the traction of the tires. It must absorb the energy developed when the car goes over bumps and irregularities, but it must not be so flexible that the wheels refuse to settle down after a bump or so rigid that the driver and passengers feel battered.

Corvette engineers have been seeking the optimum system for over 30 years. Throughout, they faced such questions as: How many pounds of weight shift should produce how much deflection at the springs? How many degrees of body roll should produce how many degrees of camber change? If shock absorbers telescope at a certain rate, should they extend at the same, or at another rate? How to minimize "toe" changes at the rear wheels when accelerating? When braking? With driver only? With driver, passenger and luggage?

The Corvette resolution is a mixture of the standard (but what a standard!) and the unique. Up front, the suspension consists of upper and lower A-arms, the standard way in Formula race cars for years.

Despite their apparent simplicity, double A-arms are not the easy way. They involve more pieces, more connections and more physics (that's why so many cars don't use them). They demand more of the engineer—more commitment, more midnight oil. They cost more. Yet, when executed properly, a double A-arm system in this type of application is unquestionably the best.

At the rear, Corvette uses its own, proprietary five-link system, a system not replicated, much less duplicated, on any other car. The foundation of the system is Corvette's composite-material (filament glass in epoxy matrix) spring that is attached behind the wheels. Next, upper and lower trailing arms (they "trail" rearward, from the body to the wheels) to locate the wheel in its fore-and-aft position and to control "wheel hop" when accelerating and "nose dive" when braking. Then, a light but strong aluminum cross member to locate the wheels in their side-to-side position, with additional tie-rods, one per side, to correct "toe" changes at the wheel as the suspension deflects ("toe" changes cause the rear wheels to create steering forces). The various elements join to the wheel carrier (hub) and body with resilient bushings that absorb a calculated percent of the energy they receive and transmit the remainder to the next piece.

Suspension II—Camber, Caster, Tread and Toe

Not so trivial trivia question: Why did horse-drawn freight wagons have dished wheels?

Answer: So the weight of the load would be carried to the middle of the iron tire surrounding a wheel, rather than beside it. In other words, the wagon wheels had camber.

This logical peculiarity of an old-time freight wagon illustrates the point that transferring weight from the body of a vehicle to the ground is not so simple as it may seem, and the complexities increase as the vehicle is faster and makes more maneuvers.

Try another trivia question: Why do the wheels of a child's red wagon wobble while those on a bicycle do not?

Answer: Because the weight is carried perpendicularly through the center of the wheels on the red wagon, while a bicycle frame directs weight ahead of the center of the wheel. In other words, a bicycle has caster.

Thus so commonplace a vehicle as a bicycle exploits sophisticated weight management to assure directional stability. So much more sophisticated, then, the system that manages four wheels on a heavier vehicle and achieves much higher speeds.

Consider what happens when a wheel goes over a bump. The old-fashioned beam front axle, still used on trucks, or the rigid "live" rear axle still used on most cars (but not Corvette) tips the opposite wheel up on edge, subtracting from its adhesion to the road.

An independent system allows each wheel to respond independently to bumps and keeps them perpendicular to the road surface as they do. But what about tread changes, particularly at the driving wheels?

Tread changes at the driving wheels shove the vehicle from side to side as they occur. However, this lateral displacement can be countered by making the rear wheels steer to a minute degree. That is, with toe control.

Trivia again: What is the primary reason cars have springs: to give them a soft ride, or to keep their wheels on the ground?

Answer: To keep their wheels on the ground.

As a wheel traverses a bump, its weight (mass) is accelerated upward at a certain speed (velocity). The momentum energy (mass times velocity) of the wheel could reach several hundred pounds. Without a spring to absorb this energy, a small bump could lift the car right off the ground.

Accordingly, everything possible should be done to reduce the weight of the elements that are not supported by the springs. Low unsprung weight means less momentum energy available to upset the car.

True or false: The center of gravity stays in the same place no matter what the car is doing.

False: The center of gravity shifts all over the place according to what the car is doing.

The weight will shift. That's physics. However, the weight shift and—more important—its consequences for traction can be controlled by the springs and suspension so that all tires allow the car to do what the driver wants.

Multiple choice: What function must occur exactly at the vertical center line of the wheel?

a.) Braking; b.) Steering; c.) Both the above

Answer: c.

Physics question: Can two objects occupy the same place at the same time?

Answer: No.

(Continued other side.)

Then how can steering and braking occur in the same place?

Answer: By careful design.

Now, stop and think about caster, camber, tread and "toe," and consider how all these must be controlled so that the tires don't lose traction as the car shifts its attitude and center of gravity during maneuvers. Whether, and how well, a system works can be read in the exact specifications of a suspension system. However, they can be read more easily in the record of performance.

Corvette's suspension allows up to 0.91g of lateral acceleration. That is, a Corvette stays on the road even when the sideways force on a tight curve reaches 3,000 pounds and when the deceleration force during braking goes above 1g and actually exceeds the weight of the car. If these numbers aren't enough, look at some others: the number of times Corvette has won on the track.*

Tuned-Port Fuel Injection

Stoichiometric ratio—a good phrase that, useful to liven up party chatter. It refers to the proportion of ingredients that is optimum for a desired result.

The relevant stoichiometric ratio is the proportion of air to gasoline for optimum burning of the fuel. In a gasoline engine, the ratio is 14.7 parts of air to one part of gasoline, the parts being measured by weight. For maximum power, you run richer—about 12.5:1—to allow increased spark and more power. Since air weighs almost nothing per cubic foot while gasoline weighs several pounds, the fuel system must do some extremely precise mixing, even in normal conditions.

But many conditions are not normal. For a cold engine—one left overnight—more fuel is required for stoichiometry. For a hot engine, less fuel is required to maintain the 14.7:1 ratio. At higher elevations, the amount of fuel is adjusted to maintain stoichiometry with the thin air.

The Robert Bosch Company of West Germany pioneered mechanical fuel injection for gasoline and diesel engines and has been a world leader for 50 years. Corvette uses Bosch injectors and mass air meter to feed its 5.7 Liter V8 powerplant.

The system consists of an inlet air plenum, tuned runners and eight fuel injectors mounted next to the cylinders they serve. A ninth injector is used for enrichment during cold starting. Here, fuel is fed to a channel in the inlet manifold and metered to the cylinders through small, drilled holes.

Ready? Set? Go! The Electronic Control Unit reads engine speed from distributor signals and determines the right moment for the spark plugs to fire. Meanwhile, it also monitors signals from the mass air-flow meter to calculate the fuel required to maintain the stoichiometric ratio for the current operating condition. Engine cold? Keep the injectors open milliseconds longer for a rich mixture. Foot on the gas pedal (as shown by vacuum and air velocity measurements)? Keep the injectors open longer for maximum power. Foot off the gas pedal and the engine decelerating to a traffic light? Shut off fuel to the injectors completely to eliminate "coast-down" emissions. Air density low due to altitude? Reduce the amount of fuel to the cylinders. Whatever the operating mode, whatever the conditions, Corvette's Tuned-Port Fuel Injection allows the engine to maximize the output of power.

**Achieved on the test track by professional drivers. Corvette equipped with 4-speed manual overdrive transmission, available Z51 Performance Handling Package and 3.07:1 axle ratio.*

Important: A Word About This Catalog.
We have tried to make this catalog as comprehensive and factual as possible. However, since the time of printing, some of the information may have been updated. Also, some of the equipment shown or described throughout this catalog is available at extra cost. Your dealer has details and, before ordering, you should ask him to bring you up to date. The right is reserved to make changes at any time, without notice, in prices, colors, materials, equipment, specifications and models. Check with your Chevrolet dealer for complete information.

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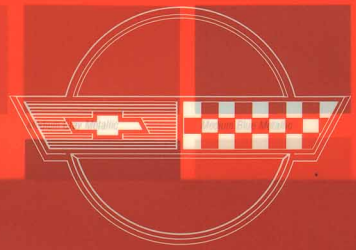
MARK OF EXCELLENCE

LITHO IN U.S.A. 4566 SEPTEMBER 1985

Corvette colors are carefully chosen and painstakingly applied. The fully automated paint system is one of the most advanced in the world. The entire paint operation is contained in a dust-free clean-room environment in which air pressure is maintained positive to keep foreign airborne contaminants out. Base coat/clear coat enamels are applied in a four-step process that results in vibrant finishes that display a deep, penetrating shine.



Silver Metallic

Yellow