BRAND POSITIONING, MODEL AND DEMOGRAPHIC INFORMATION

Brand Positioning

Thomas Keating called Corvette "a sports car in the American tradition. It is intended to satisfy the American public's conception of beauty, plus comfort, convenience and performance." After more than 40 years in the making, Corvette continues the brand mission it began back in the 1950s. Today, Corvette's brand identity and equity in the marketplace are among the strongest and most coveted in the automotive industry.

Today, Corvette is not just a sports car; it's an icon. A symbol of achievement. It's a brand with a mystique beyond that of a sports car, with a brand identity so strong that manufacturers in other industries license its use in an attempt to capture the magic.

The fifth generation Corvette will reach beyond traditional Corvette buyers in terms of appeal. The new design meets the quality and ergonomic expectations of competitive owners, while providing performance and style that are unmistakably Corvette.

Model

The 1997 Corvette is available in one body style: Corvette Coupe – a two-door, two-seat hatchback coupe, with a removable roof panel.

Competitors

Corvette competes in the high sport market segment – a small (less than one percent of the passenger car market) yet highly visible segment.

Corvette is the highest selling nameplate in the high sport segment, with sales of 21,560 in the 1996 model year, or 39 percent market segment share. Three models account for 73 percent of total sales in this segment. Several of Corvette's competitors are exotic sports cars which sell fewer than 1,000 units per year.

Looking back through the filter of five decades, the market in which Corvette competes today may seem very different than it was back in the ’50s. In fact, there are some surprising similarities. In ’53, two major competitors were Jaguar and Mercedes. Today, these two remain and continue to introduce new models while other European manufacturers such as Porsche and BMW have joined the fray. Back in the early ’50s, there were no other serious American competitors. Some, like Ford Thunderbird, entered the market only to stray from the original ideal of a “personal sports car.” Today there are few other American sports cars – possibly only one, depending upon how you define the genre.

Over the years, the market has seen its share of changes as well. MG roadsters and Triumph’s TR-series – popular around the time of Corvette’s introduction – have since disappeared from the American competitive landscape. Japanese carmakers, almost non-existent in the U.S. in the 1950s, have since entered the competition, and some have seen success (e.g., Nissan 300ZX). Others have tried and failed – models such as the Toyota MR2 and Mazda RX-7 are extinct. Reports indicate Nissan will discontinue selling the 300ZX in the U.S., after sales fell from 60,000 to just over 3,100 from 1986 to 1995.

Corvette remains America’s original, most enduring production sports car. Corvette’s major competitors in the high sport market segment include:

- Acura NSX
- Dodge Viper
- Mitsubishi 3000GT
- Porsche 911
- Toyota Supra

Demographics

Corvette will be marketed to buyers in the high sport segment – both current Corvette owners and owners of competitive makes. Target buyer demographics include:

- Median household income: $100,000
- Gender mix: 67 percent male/33 percent female
- College educated: 68 percent

- Married: 63 percent

STRUCTURE

Corvette's structure is stiffer for 1997, compared with previous models. The 1997 Corvette features the stiffest underbody structure in the car's history. Engineers went to great lengths to improve Corvette's structure, which is, in many ways, the key to a host of other improvements.

Design of the underlying structure began with a top customer imperative: Corvette must be "well built," which means improved quality, ride and handling, ergonomics and safety.

Corvette's structure reduces objectionable noises and steering wheel, floor and mirror vibrations by absorbing them before they reach the passenger compartment. The structure enhances the feeling of precision and quality from day one.

In addition, Corvette's stiff new structure actually helps improve ride and handling. In the past, engineers had to tune the suspension, in part, to accommodate the flexibility of the structure. With a more rigid structure, engineers were free to tune the suspension for incredible ride and handling.

The structural design made it possible to create more room for people and cargo, create door openings that are easier to access and an improved angle of visibility through the windshield.

In terms of safety, Corvette's firm foundation helps absorb energy in the event of a collision, providing crashworthiness. Crush zones — built into the overall structure — help minimize impact intrusion into the passenger compartment, helping to protect the occupants. In addition to all these new structural strengths, the real accomplishment was adding stiffness without adding weight. In fact, the new Corvette weighs 69 lbs. less than the 1996 model.

Structural Features

Structural integrity is like the foundation of a house. It's the basis for everything that's built onto it. Following is a list of structural features, and how each contributes to Corvette's overall stiff structure: Corvette's hydroformed frame rails are pressed into shape via high-pressure hydraulics at GM's Metal Fabrication Plant in Pontiac, Mich.

Frame. Corvette features a full-length perimeter frame with side rails manufactured out of seamless tubular steel. These rails are joined by two bumper beams which are welded on, rather than bolted, for high strength. The rails are "hydroformed" – i.e., pressed into shape by a high-pressure hydraulic press developed by GM. Corvette's rails represent the largest single hydroformed parts being used in an automotive application. The rails are an improvement over traditional designs because they're seamless. (Former Corvette rails were constructed of 14 individual pieces per side that were welded together.) The rails are also more consistently stiff and strong, and they enable engineers and designers to use space inside the vehicle more efficiently. By putting a major structural member in the center of the car, the burden placed on the outboard rails is reduced. The Corvette Design Team took advantage of this construction to reduce the height of the side rails as they pass through the passenger compartment. The lower rail allowed a lower step-in height, and more comfortable access for the driver and passenger.

Cockpit and windshield frame. Corvette's cockpit is framed by a welded cage of aluminum castings and extrusions – a design that allows engineers to optimize mass and stiffness and reduce interior vibrations.

Instrument panel cross member. This feature provides a firm foundation for the instrument panel resulting in reduced noise and vibration. A magnesium steering column support and magnesium-core steering wheel are lightweight and sturdy, reducing mass and steering wheel shake.1997 Corvette hydroformed frame rails with bumper beams and closed drivetrain tunnel.

Closed drivetrain tunnel. The drivetrain tunnel features long, straight surfaces that help create more interior room and contribute to overall rigidity. Since the transmission is located in the rear of the car, the wide flaring required for the bellhousing on a traditional front-mounted transmission was eliminated. A flaring would have intruded on interior space. Although typically open on the bottom, the

tunnel on the '97 Corvette is closed by a bottom plate attached with 36 bolts, which adds to the overall solidity of the structure.

Twin mid-ship-mounted composite fuel tanks. Surrounded by the structure, the location of the fuel tanks helps lower the cargo floor – which minimizes fuel load effects on weight distribution – and helps reduce cargo liftover distance. Also, their location is designed to provide crashworthiness.

Sandwich composite floor. The floor is constructed using two layers of an aircraft type composite floor, sandwiched on either side of a balsa wood core. The balsa wood helps filter out noise and vibration, and contributes to the structure of the car. The balsa wood makes the floor 10 times stiffer than the use of composites alone. Numerous "high tech" synthetic fillers were tried, but none matched the stiffness, light weight and damping performance of natural balsa wood.

One-piece cast aluminum front and rear chassis cross members. These cross members are lightweight and sturdy. Their dimensional stability promotes consistent handling and suspension geometry from car to car.

SUSPENSION

Suspension

The 1997 Corvette suspension provides great handling and smooth ride. Suspension designers typically face a common paradox: Great handling comes at the expense of smooth boulevard ride, and vice versa. The end result is usually a compromise, to some degree, of one or the other.

Corvette engineers set out to do the seemingly impossible – enhance both ride and handling. The goal: Out-handle the competition, while providing a ride that rivals a touring car.

The key is suspension geometry: Location and configuration of suspension components is critical to performance. The new Corvette's suspension geometry is designed to allow ride and handling to work independently of one another.

Another key is Corvette's stiff structure. During competitive benchmarking, engineers attributed smooth ride to a stiffer chassis which tends to reduce squeaks and rattles.

The 1997 suspension design is exclusive to Corvette and brand new – no carryover parts were used. Its custom design differs from some major competitors who use off-the-shelf parts.

Overall Suspension Design

Fully independent four-wheel short/long-arm (SLA) suspension. Corvette's suspension is similar to that used in many race cars and other high-performance cars. Unlike its predecessor, the '97 'Vette suspension is height adjustable at the factory for consistent ride and handling, car after car. Each car is custom-adjusted during production according to its specific option content and resultant mass. Thus, every Corvette off the line is equal in terms of excellent ride and handling.

Control arms. Forged aluminum front upper control arms, and cast aluminum front/rear lower and rear upper control arms feature strength with low mass.

Springs. Corvette uses an improved version of the transverse composite leaf spring, a new design with its own patent. Spring pads are located on the lower, longer arms at each corner. The springs run from one side of the car to the other, and are attached to the chassis via rubber-isolated mounts. Engineers mounted the springs at the chassis' most rigid points to better control springing forces. Thanks to the stiff chassis, lower spring rates could be used to achieve great handling. Lower spring rates, in turn, help improve ride smoothness.

Bushings. Different bushings are used for the front and rear. Front bushings take the brunt of the cornering loads and are very stiff for better stability and predictability. Rear bushings are soft, helping the rear of the wishbone absorb the impact when going over bumps and potholes.

Rear independent suspension. The rear suspension design has been improved. On the previous Corvette, half shafts played a dual role: They transferred power to the rear wheels and served as part of the suspension's upper control arms. For '97, actual upper control arms have been used for smoother, quieter ride and better control of rear suspension geometry. This also results in better handling because the suspension

is attached directly to the body and allows the powertrain to be mounted “softly” for reduced noise and vibration.

BRAKES, STEERING AND TIRES

Brakes

1997 Corvette brake system features include:

Larger brake rotors. Corvette’s larger brake rotors provide improved cooling characteristics. Front fascia brake cooling ducts further enhance braking performance and help reduce “fade.”

Four-channel Bosch ABS V anti-lock braking system. Corvette’s standard ABS incorporates Corvette’s traction control system, which features control of wheel slip without throttle pedal disturbance for ’97.

Dual-piston front brakes, single piston rear. Aluminum sliding-type brake calipers are corrosion-resistant, enhancing durability. Front calipers feature the “Corvette” name cast into the metal.

New brake pedal. Corvette features a cast aluminum racing-style brake pedal.

Less noise. Premium non-metallic brake linings reduce unwanted noises such as squeals and groans.

Improved performance. Corvette offers shorter stopping distances to keep step with increased handling performance available through the new chassis and suspension.

Magnasteer II Steering System

The ’97 Corvette features the Magnasteer II Steering System as standard equipment. Magnasteer II is a variable effort rack-and-pinion steering system. The system features lower effort at low speeds for easier parking and maneuvering, and higher efforts at high speeds for positive road feel and stability. Magnasteer II is specifically

designed to please the enthusiast with better tactile feel in high performance driving situations, as well as everyday driving.

The system has been revised and improved for the ’97 Corvette. It was incorporated into the overall chassis design from the onset, which allowed engineers to tune the system for maximum effectiveness. Also, Magnasteer II features smooth transitions between high effort (high speed) and low effort (low speed) for a natural, in-command feel of the road.

The system features a power steering fluid pump and intermediate shaft, made of lightweight aluminum to reduce mass and resist corrosion.

Tires

The 1997 Corvette features new Goodyear Eagle F1 GS Extended Mobility Tires (EMTs). These tires provide excellent performance, even at zero psi inflation. EMTs use self-supporting sidewalls. Should tires lose air pressure, the weight of the vehicle is supported by the EMT’s reinforced sidewall, and the vehicle continues to roll. The system works so well, Corvette no longer needs a spare or a jack, which helps reduce vehicle mass and increase usable space.

The real benefit of EMTs is security. In the event of a loss of tire pressure, the driver can get to a service station without stopping.

In fact, performance and ride with zero inflation is so similar to normal inflation that drivers need to be warned of lost tire pressure via Corvette’s standard Tire Pressure Monitoring System. This system operates at speeds above 15 mph via battery-powered sensors inside each valve stem, which transmit information to the Driver Information Center. These sensors provide accurate readings within 1 psi, with altitude compensation. Information is transmitted via FM radio frequencies; however, more than 2 million sensor “identities”

virtually eliminate interference between fifth-generation Corvettes in close proximity. Corvette’s EMTs for ’97 provide all this while maintaining excellent tire performance in their normal, inflated state.

POWERTRAIN

Chevrolet has been producing legendary small block V8 engines since 1955. In many ways, the high performance-to-size ratio of the small block changed the way people thought about Chevrolet. Virtually overnight, the Chevrolet image shifted toward high performance.

Ed Cole was instrumental in bringing about the change. Cole, Chevrolet Chief Engineer in 1955, introduced a V8 engine to Corvette that was both lighter and larger (265 cubic inches) than Chevrolet's 235 cubic-inch in-line six cylinder. The small block, which outpowered the original six cylinder by 30 percent, was so popular it became standard equipment one year later in 1956. The following year, Cole and engineer Zora Arkus-Duntov ushered in yet another advancement which would change the course of Corvette history: Fuel injection.

The small block V8 has since become a Corvette mainstay. It has powered millions of cars, trucks, boats and industrial machinery, and has set an industry standard for performance.

Redesigning the small block V8 for 1997 has been described by GM Powertrain engineers as "a very exciting and emotional event." As engineers, redesigning the beloved engine from a clean sheet of paper was the chance of a lifetime.

The result is the new LS1 5.7-liter small block V8, with 345 horsepower and 350 lbs.-ft torque – more power than either available 1996 Corvette engine (see chart). Even more incredible – the new small block achieves its power numbers even within the confines of emissions and CAFE regulations. All this with reduced noise and vibration, and increased durability.

While engine features may have changed, the LS1 stays true to the small block heritage. The LS1 is a Chevy small block pushrod V8. In the end, engineers could find no substitute for the simplicity and raw power of the pushrod when it came to equipping the fifth generation Corvette. The following is a synopsis of 1997 Corvette powertrain features and benefits.

All-aluminum engine block

For the first time in Chevrolet's history, the small block V8 features an all aluminum engine block (formerly cast iron) with cast iron cast-in-place cylinder liners. The 1997 engine block is both lighter and stronger than the previous design.

Displacement remains 5.7 liters (approximately 345 cubic inches), though the geometry of the cylinders has changed, with a slightly smaller bore and longer stroke. The smaller bore provides more area between the cylinders for a very rigid, durable design, with ample room for cooling.

The LS1 engine's deep skirt extends below the centerline of the crankshaft. The new block is made more rigid through a change in its overall shape. Typically, the block ends at the centerline of the crankshaft. The LS1 has a "deep skirt" which extends past the bearing caps. Bolts were added that tie the bearing caps directly into the engine block from the side. The deep skirt and additional bolts add up to less noise and vehicle harshness for the customer.

The small block V8's traditional five-bolt head pattern has been changed to a four-bolt pattern for 1997.

Other features include:

Four-bolt head pattern. The small block V8's traditional five-bolt head pattern gave way to a better idea – a four-bolt design. The four-bolt design helps eliminate distortion, and allows better engine sealing. And thanks to the "deep skirt" design, the LS1 uses longer head bolts, which fasten much deeper below the surface into the "backbone" of the engine. That means reduced stress and distortion at the top of the cylinders, which results in better sealing and lower tension oil rings, for less friction and enhanced fuel economy.

440 bore centers. 440 bore centers – or, the 4.4″ distance between bore centers – are a small block trait that goes back 40 years. That measurement remains the same for 1997 as it did in the beginning. "After all," says John Juriga, 1997 LS1 V8 Engine Project Manager, "some things are sacred."

Pistons. Pistons have been redesigned to help meet emission compliance well into the future. For 1997, the top ring is closer to the top of the piston to reduce hydrocarbon

emissions. Engineers also eased tension on the piston rings to reduce friction and improve fuel economy.

Lighter weight pistons and rods enabled engineers to tune the engine to higher rpm, achieving more power from the small block's 5.7-liter displacement.

The 1997 LS1 piston head (far left) features a top ring closer to the top of the piston, compared with pistons from the 1996 LT1 and LT4 engines.

Cylinder Head/Intake Ports. In the '96 LT1 and LT4 engines, "Siamese" ports route air flow at different angles. With differently shaped ports for different cylinders, each port has its own air distribution characteristics.

Intake ports on the LS1 engine allow incoming air a straight shot into the combustion chamber.

With the new LS1, each intake port is identical to the next. This design eliminates any harsh corners, and allows incoming air a straight shot into the chamber. It provides better breathing, thus enhancing performance and efficiency.

Intake Manifold. The new LS1 manifold is made of a composite material which is strong, yet lighter than aluminum. The inside surface is very smooth, allowing air to glide through the manifold with less restriction and higher velocity.

The composite manifold also conducts less heat. Air into the engine isn't "heated air" and, thus, has a higher density. Higher density air means more power.

Exhaust System. The '97 Corvette's exhaust system tackles a common challenge: Most harmful emissions are generated in the first few minutes after a "cold" engine is started. Emissions are reduced when the catalytic converter warms up from hot exhaust gasses. So, for 1997, Corvette engineers wanted to make sure hot exhaust gasses got to the catalytic converter sooner.

The new exhaust manifold is designed to provide increased performance and reduced cold-start emissions. Here's how: Formerly, exhaust manifolds were cast iron. Cast iron is very durable, but it dissipates heat, and helps cool down the exhaust gas. Corvette's new dual wall exhaust manifold uses two high-strength stainless steel walls with a layer of air between the inner and outer walls to act as an insulator. As a

result, hotter gasses get to the converter more quickly, improving cold start emissions.

Corvette's exhaust system is aluminized stainless steel for longer life. Corvette features a true dual exhaust system with dual mufflers and quad exhaust outlets.

Valve Train. GM Powertrain engineers simplified the LS1's valve train design for 1997. The new design is simpler, using fewer compound angles. For 1997, valves, rocker arms and push rods are all positioned in-line. Stress on the valves is reduced, allowing engineers to use slimmer valve stem diameters, lighter springs and roller rocker arms, providing enhanced fuel economy, reduced friction and increased durability. The LS1's high rpm capability helps the engine attain its impressive horsepower and torque ratings while raising maximum fuel efficiency above that of the previous engine.

Extended Sump Oil Pan. The 1997 LS1's oil pan is an example of how engineers turned a challenge into an opportunity.

For '97, the Corvette oil pan had to have a low profile, enabling a low engine position and low hood. At the same time, engineers realized that the oil pan had to perform. Corvettes are known for their ability to handle aggressive maneuvers which, in extreme cases, can cause the oil in the oil pan to evade the pick-up tube.

The 1997 LS1's oil pan features extended sumps on both sides for increased oil capacity.

Corvette's redesigned oil pan answers both challenges. Engineers achieved a lower profile in overall packaging, thanks to the uniquely-shaped "extended sumps" on either side of the oil pan.

Coincidentally, the sumps help increase the engine's oil capacity. So, even around the harshest turns, there is a good supply of oil to the pickup tube. That means better performance and enhanced durability.

Other design enhancements include:

Sealing. With traditional oil pans, curved surfaces created great challenges for engineers in terms of proper sealing. Along with the "deep skirt" design of the engine

comes a large, flat surface on which to attach the oil pan. This flat surface makes sealing easier, more effective and more durable.

Structure. The flat surface where the oil pan mates with the engine block and a flat direct attachment to a one-piece full round bellhousing provide a significant improvement in structural rigidity. The LS1 oil pan, more rigid than its predecessor, serves as a structural member. As a result, the oil pan plays a key role in helping to reduce noise and vibration for the customer.

Gerotor oil pump. A high-efficiency Gerotor oil pump, new for 1997, helps improve performance. Driven at the front of the crankshaft, the pump provides lower temperature oil delivery and better performance because of less parasitic power loss.

Ignition System

Corvette's new ignition system features an individual ignition coil for each cylinder. Coils are located near the spark plugs for high energy ignition, which provides better combustion, lower emissions and enhanced durability.

The 1997 Corvette LS1 features an individual ignition coil per cylinder.

Engine Compartment Packaging

In days gone by, you could open up the hood of most any car and see daylight from underneath. The relative simplicity of a vehicle's engine components gave designers fewer challenges in terms of engine compartment layout.

Today, the job is far more challenging. Corvette's engine compartment must house an incredible array of components and technologies that were unheard of 10, 20 or 30 years ago – from the technology that reduces and monitors emissions, to computers that adjust the temperature inside the cabin and continuously check the air pressure in the tires.

The fifth generation Corvette uses an integrated approach that simplifies and reduces the number of wiring harnesses and components needed to run the vehicle's systems. An added benefit . . . it looks good, too.

Improvements for 1997 include:

Powertrain Control Module (PCM). Corvette's PCM has more power than many home computers and is one of the industry's most sophisticated. The PCM is "multi-functional," controlling multiple systems that required more hardware and separate controllers in the past.

Electronic Throttle Control (ETC). The 1997 LS1 is GM's first gasoline engine with ETC. ETC allows engineers to tailor the vehicle's throttle progression to meet a vehicle's character. For Corvette, engineers tuned the throttle to match the sporty character of the car. ETC also integrates cruise control and traction control to a single controller. Gone is a bushel of hardware, improving underhood appearance and reducing mass. ETC works in conjunction with the traction control system in controlling wheel slip. Traction control is accomplished without any disturbance to throttle pedal feel.

V8 Engine for 1997 Corvette

ALL-NEW 1997 CORVETTE ENGINE:
5.7 LITER V8 SFI (LS1)

This model year brings a milestone addition to the world of GM small block engines: the 5.7 Liter V8 LS1 engine. All new and exclusive to Corvette for 1997, the LS1 engine has a number of cutting-edge features that help make Corvette a truly unique performance machine. Important improvements over last year's LT1 and LT4 V8 engines include:

ENGINE BLOCK

For 1997, the LS1 has a unique deep skirt aluminum engine block, which is lighter and stronger in design.

- The LS1 is still a 5.7 liter V8 with 4.400" bore centers. However, the geometry of the cylinders has been changed to provide a slightly smaller bore and longer stroke. This design creates more area between the cylinders for rigidity, durability and cooling.
- The engine block is designed to be more rigid, based on its overall shape. This design was incorporated to help reduce the effects of combustion heat and energy, which can bend and distort an engine block, and generate noise and vibration.
- Typically, the engine block ends at the centerline of the crankshaft. The LS1 has a deep skirt that extends down past the main bearing caps. Two bolts have been added that tie the bearing caps directly into the engine block from the side, for greater durability, as well as reduced noise and vibration.

CYLINDER HEAD

Replicated ports optimize airflow into the engine.

- Each cylinder head port is identical in every detail, and allows for consistent cylinder-to-cylinder airflow distribution. The incoming air also has a "straight shot" into the chamber.
- A four-bolt cylinder head design is used for LS1, rather than the five-bolt design used in previous years. This four-bolt design virtually eliminates bore distortion. Head bolts are threaded deeply into the block, resulting in better sealing, less friction and enhanced fuel economy.

INTAKE MANIFOLD

With any engine, airflow is its lifeblood. The more air, the better the performance. The intake manifold is like the main artery bringing air into the engine. Significant refinements were made to the LS1 intake manifold.

- LS1 breathes easier, thanks to the use of new composite materials for the intake manifold. This material is strong, yet lighter than aluminum. The composite material is smoother and runs

cooler, and allows high-density intake air to flow with less restriction through the tubular intake manifold. This new intake design enhances performance and reduces mass.

VALVETRAIN

The LS1 valvetrain offers customers significant performance benefits and quieter operation.

- Engineers designed a hollow camshaft to take mass out of the engine, based on "lighter equals faster" reasoning.
- The valves, rocker arms and push rods are all positioned in line, eliminating the compound angles of the previous design that can add to valvetrain stress.
- The camshaft has larger bearing journals that allow larger lobes, reducing lobe stress for greater durability.
- Cast-steel roller rocker arms add stiffness to the valvetrain structure, reducing friction and enabling higher engine speeds.
- Hydraulic roller valve lifters also help to minimize friction and eliminate internal power loss. This also maximizes fuel economy and improves wear resistance over time.

ACCESSORY DRIVE

The LS1 accessory drive system was developed with quality, reliability and durability in mind, as well as low noise and vibration.

- Direct-mount accessories eliminate bolts, and brackets, helping to reduce engine noise and enhance durability.

EXTENDED SUMP OIL PAN

The LS1 oil pan is designed to compensate for the quick, sharp turns that Corvette is famous for. This new design increases oil capacity and minimizes the possibility of oil shifting in the pan, which could result in oil evading the pickup tube.

- The LS1 oil pan has a unique shape and is made from lightweight aluminum. It features extended sumps that contain additional oil to ensure a good supply of oil to the pick-up tube. This means better performance and enhanced durability.
- Other benefits of the new oil pan include better sealing and greater structural integrity. The deep skirt block has a large flat surface on which the oil pan is attached, eliminating curves and corners that are hard to seal. And the oil pan is now a structural member, enhancing overall engine rigidity.
- The LS1 incorporates a high-efficiency Gerotor oil pump, driven at the front of the crankshaft.

PISTONS

In order to create an engine that would meet emissions requirements well into the future, engineers redesigned the pistons to reduce hydrocarbon emissions. Thanks to uniform cylinder bores that result from the new 4-bolt head design, engineers were also able to ease tension on the piston rings to reduce friction and improve fuel economy.

- LS1 pistons and rods are lightweight, which helps to improve engine RPM.

IGNITION SYSTEM

Engineers have developed a new coil-per-cylinder ignition system. It is comprised of eight individual coils attached to the two aluminum rocker covers.

- Each coil is located near the spark plug for high ignition energy, which results in more efficient combustion and better performance.
- The electronic spark timing signals for the coils originate from the crankshaft and camshaft position sensors enabling high-accuracy spark delivery and misfire detection.

- The firing order of the LS1's ignition is also new. The new sequence is 1-8-7-2-6-5-4-3, whereas past small blocks had a 1-8-4-3-6-5-7-2 firing order. This was done for better idle stability and reduced vibration.

POWERTRAIN CONTROL MODULE (PCM)

The PCM for the new LS1 engine is very sophisticated. It electronically controls a number of powertrain functions, including precise sequential fuel delivery and transmission timing.

- The PCM for the LS1 also incorporates a new engine knock control algorithm which improves reliability.

EXHAUST MANIFOLD

The LS1 exhaust manifold quickly transfers hot exhaust gas to the catalytic converter, which reduces emissions.

- The dual-wall, fabricated manifold consists of two layers of high-strength stainless steel, with an air gap between. The air gap acts as an insulator, preventing heat from escaping, instead forcing it to the catalytic converter.
- This technology was selected primarily for its ability to reduce cold-start emissions by cutting down drastically on the time required for the catalytic converter to begin functioning. It dramatically improves the efficiency of the catalytic converter while enhancing durability and performance.

SEQUENTIAL FUEL INJECTION (SFI)

The LS1 incorporates a highly sophisticated level of Sequential Fuel Injection technology.

- SFI is a very precise fuel delivery system in which the PCM individually controls the fuel injectors.
- Each of the eight injectors are fired, one at a time, in a sequence that matches the firing order, further improving fuel timing for optimum combustion. The fuel is precisely metered, taking into account several engine operating parameters.
- SFI offers great idle stability, performance, durability, fuel efficiency and driveability.
- Thanks in part to SFI, the new LS1 will be emissions-compliant for years to come.

OTHER FEATURES

Other LS1 features result in a variety of customer benefits:

- A roller timing chain with nylon tensioners improve engine sound quality
- Electronic Spark Control sensors, located in the valley of the block, help reduce spark knock
- A mass airflow sensor improves emissions control.

EASY MAINTENANCE

Like the rest of Chevrolet passenger car engines, the LS1 makes the owner's life a little easier by featuring extended- maintenance components.

- Standard platinum-tip spark plugs allow Corvette to go 100,000 miles* before the first scheduled maintenance.
- Extended-life coolant has a first scheduled replacement interval of 5 years or 150,000 miles, whichever comes first*.

*Maintenance needs vary with different uses and driving conditions.

GM Small Block V8 Highlights

- 1955 -- The small block engine was first introduced by former Chief Engineer/Chevrolet General Manager Ed Cole. This early version was called the "Turbo-Fire V8," and ranged from 162 to 180 horsepower.
- 1956 -- The GM small block lived up to its performance reputation by powering a Chevrolet driven by Zora Arkus-Duntov up Pikes Peak in only 17 minutes.
- 1957 -- The "Ramjet" 283ci small block fuel-injected V8 provided one horsepower for every cubic inch. Chevrolet advertising touted, "The Road Isn't Built That Can Make It Breathe Hard!
- 1959 -- The GM small block V8 achieved a horsepower rating of 315, which served it well in a time of intense power competition among America's automotive manufacturers.
- 1962 -- Corvette received a standard 327ci small block coupled with a 2-speed automatic transmission.
- 1963 -- The carbureted 327ci small block V8, which pumped out 345 horses, powered the Nova SS, and continued to do so until 1966.
- 1967 -- Camaro Z28 was introduced with a 302ci small block V8 designed for racing. This engine carried the Z28 to back-to-back Trans Am championships in 1968 and 1969.
- 1970 -- LT1 engine option was made available.
- 1971 -- Rally Nova featured a 350ci small block V8.
- 1971 -- Horsepower rating changed from gross to net.
- 1975 -- Chevrolet introduced Monza with an available 262ci small block V8, the smallest overhead valve 8-cylinder engine in GM history.
- 1978 -- The 25th Anniversary Corvette was powered by a 350ci small block which produced 185 horsepower.
- 1982 -- A new Crossfire Injection System was introduced that used twin above-the-throttle body Electronic Fuel Injectors and a specially designed manifold.
- 1983 -- Monte Carlo SS was introduced with NASCAR performance in mind. Under the hood of this successful stock car was a 305ci small block that produced 180 horsepower.
- 1985 -- 5.7 Liter V8 with Tuned Port Fuel Injection debuted.
- 1989 -- The Bowling Green, Ky. Corvette Assembly Plant produced sixty cars for the last year of the Corvette Challenge series. All cars featured a "sealed" 350ci small block V8.
- 1992 -- Second-generation 300 hp, 5.7 Liter V8 LT1 engine introduced.
- 1993 -- The fourth-generation Camaro was introduced with a standard 5.7 Liter, 275-horsepower small block LT1 V8 engine on Z28 models.
- 1996 -- 5.7 Liter LT4 V8 introduced, producing 330 horsepower and 340 lb.-ft. of torque.

- 1997 -- The newest small block is introduced on the new fifth-generation Corvette, producing 345 horsepower and 350 lb.-ft. of torque.

DRIVETRAIN

One of the 1997 Corvette's most remarkable improvements can be found in the drivetrain.

For 1997, Corvette features a rear-mounted transmission. The rear-mount configuration enabled engineers and designers to create more room for the driver and passenger. Both Corvette transmissions have been revised to accommodate the new rear-mounted configuration:

Hydra-Matic 4-Speed Automatic Transmission w/Overdrive (4L60-E). The standard 4-speed automatic features a two-piece case with a full bellhousing for increased stiffness. Electronic controls improve shift timing and smoothness when compared to a non-electronically controlled transmission. The transmission is filled with Dexron™ III Transmission Fluid, which needs only periodic changing and replacement (5 years/150,000 miles under normal conditions. May vary with actual use. See Owner's Manual for restrictions.) It also includes the Brake/Transmission Shift Interlock feature, which prevents the driver from shifting out of "Park" without first depressing the brake pedal.

Borg Warner 6-Speed Manual Transmission w/Overdrive 5th and 6th Gear (T56). The rear-mounted 6-speed manual transmission features a self-adjusting clutch system that provides lower effort, reduced wear. The skip-shift feature requires shifting between 1st and 4th gears, skipping second and third, under certain throttle conditions.

Other enhancements for 1997 include:

Torque Tube. An aluminum tube houses a metal composite prop shaft for reduced noise and enhanced durability.

Getrag limited slip rear axle. The limited-slip rear axle features an aluminum case with hydraulic rear mounting.

STYLING

The exterior design of the 1997 Corvette is a synthesis of aesthetics and performance . . . passion and logic. Passion made the new ' Vette look like a Corvette. (See "Design Evolution" section for a thorough explanation of Corvette interior and exterior styling features.) Logic dictated improvements that allow the car to handle better, the doors to open more easily, better access to the interior and to a larger rear cargo area, as well as a hood that' s easier to open. In wind tunnel testing, Corvette achieved a 0.29 CD - the lowest coeffecient of drag of any mass-produced car in North America (except GM' s own electric vehicle). Corvette' s CD is lower than most Winston Cup competitors, and it' s the best in the world among high-end sports cars.

Following are exterior features that enhance both aesthetics, and performance:

Body. Body panels are constructed of flexible sheet-molded compound (SMC), which resists damage and corrosion. Fenders are reaction-injection molded, a very designer-friendly process that allowed stylists to incorporate dramatic air scoops on the sides which extend to the doors. Quarter panels are bolted, not bonded, to the structure to help minimize collision repair.

Fascias. Both front and rear fascias have five-mph bumper systems - a feature not found on all other sports cars. Five-mph bumpers help lower repair and insurance costs.

Rear deck. Compared with its predecessor, the ' 97 Corvette is proportioned differently for high speed air flow management. A sharp edge along the back of the deck also enhances air flow.

Space

Corvette's interior spaces underwent many changes . . . some subtle, some incredible. The goal was to increase the user-friendliness of the interior. The end result is a Corvette, with improved roominess and refinement in almost every aspect of the car. (See "Design Evolution" section for background on how Chevrolet finalized Corvette's interior and exterior styling.)

Spatial Improvements

Dimension	Improvement ('97 vs. '96)
Head room (in.)	+1.3
Leg room (in.)	+0.7
Shoulder room (in.)	+1.4
Driver footwell width (in.)	+3.1
Passenger footwell width (in.)	+6.3
Seat Travel (in.)	+0.5
Cargo capacity (cu. ft.)	+12.4
Trunk area reach-over distance (in.)	-13.8
Door opening, top (in.)	+0.8
Door opening, bottom (in.)	-3.7

Head, leg and shoulder room have been increased. Width of driver's footwell has been increased by 3 inches, which allows room for a real "dead pedal." Passengers also have more foot room than before.

Seat travel has been increased to accommodate a greater range of adults comfortably.

A new, larger rear cargo area has 98 percent more room. Usable space was maximized. The 1997 Corvette can hold two large bags of golf clubs in the rear cargo area. Reach-over distance has been shortened to make the trunk easier to access.

Door opening size increases for 1997. Step-over height at the rockers has been reduced and roof height has been increased, making it much easier to get into and out of the new Corvette.

ERGONOMICS AND HUMAN FACTORS

The design of Corvette's interior is a study in refinement in areas where drivers and passengers interact with the car. The concept: Give the driver a greater feeling of control while making the interior more comfortable and more user friendly.

Perfecting the "human factors" enhances both the ownership experience and the safety of the vehicle. If drivers perform functions quickly, easily and intuitively, then human performance and driving pleasure are enhanced. Safety is enhanced when accident avoidance measures become simple, natural actions. Improved forward vision and larger interior and exterior rearview mirrors for increased rearward visibility also enhance Corvette's safety.

In addition, the look, feel and sound of the interior have all been refined for 1997. Standard leather bucket seats with power driver's side seat adjuster have been designed for comfort and support. Inside, the driver and passenger are surrounded by door panels and window pillars with a new trim that is softer to the touch. Soft-touch controls add to a feeling of refinement.

Corvette's instrument panel features a redesigned, more robust construction. Heating/air conditioning controls and stereo hardware are attached directly to an aluminum structural member, resulting in reduced shake and vibration.

As for interior noise reduction, designers and engineers first distinguished between "good" noise and "bad" noise. Corvette owners love the sound of intake, exhaust and precision machinery. However, there are objectionable noises that were reduced through improved sound insulation throughout. Even wiring harnesses within the instrument panel have been wrapped to prevent noise from entering the passenger compartment. Corvette's composite dual fuel cells are constructed with baffles which further reduce unwanted noise.

Corvette has always been a technical showpiece – one of the most advanced production sports cars in the world. The fifth generation Corvette is no exception.

Sophisticated electronics provide Corvette drivers with safety, comfort and convenience.

All electronics are connected via an advanced, programmable multiplex wiring system that performs multiple tasks on a single wire. With 20 percent fewer wires, multiplexing increases reliability.

The following are highlights Corvette's improved ergonomic features and human factors.

Comfort and Convenience

Driver Information Center. Positioned below the gage cluster for easy readability, the display features 12 individual readouts in any of four different languages – English, French, German and Spanish. Also using this display, the driver can configure the full range of programmable settings, including entry, alarms, seating and lighting.

Doors. Doors are balanced so that they're easy to open and close. Door handles are larger and therefore easier to use. The doors are triple sealed against unwanted noise for quiet ride.

Entertainment system. Corvette's new music system is the result of a collaborative effort between Bose® and Delco Electronics. This new system features the latest Delco Electronics AM/FM stereo receiver with cassette and new Bose electronics and speaker technologies – the same Bose technologies used in the new $30 million Gulfstream V® business jet. Door speakers employ state-of-the-art, thin-profile, lightweight speaker technology. The door-mounted eight-inch woofers are 75 percent lighter and 50 percent thinner than conventional eight-inch speakers. Each woofer is designed to withstand 100 watts of continuous input power delivered by the smallest amp of its kind in the industry (approximately the size of a deck of cards). The system also includes door-mounted hybrid 3-1/2 inch tweeter/mid-range speakers and rear quarter-panel mounted 6-1/2 inch tweeter/mid-range speakers. A Bose signal processing module manages the system's sound characteristics.

The system's active equalizers (each with the acoustic resolution of a 32-band graphic equalizer per channel) are tuned specifically to the unique acoustic environment of the Corvette, providing more realistic and accurate vocal and instrumental tone than conventional graphic equalizers. The system features 252

watts, and integrated compression circuitry which eliminates audible distortion. The Delco AM/FM stereo has a "brain" that remembers the tone control settings for each station and recalls them when the station is selected. Antennas hidden in the windshield and rear window glass provide great reception even in crowded urban areas, and aren't subject to damage in car washes like traditional mast antennas. Also available are a stereo with Delco CD player (RPO UN0), and trunk-mounted Delco CD changer with a removable 12-disc cartridge (RPO U1S).

Grab handle. A passenger side grab handle assists in entry, egress.

Hatch. Corvette's rear hatch features a full frame with gas-assisted struts mounted in a vertical position for easier opening and closing.

Hood. Corvette's hood is much smaller and lighter than its predecessor's clamshell hood. The hood is assisted by pneumatic struts and is easier to open and close.

Ignition. The ignition switch is mounted on the instrument panel, making it easier to find.

Instruments. The instrument panel is designed in the analog tradition of simple, easy-to-read gages. Today's I.P. is the end result of a 13-year evolution. It provides a good balance of utility and amenity – both digital (used for the Driver Information Center) and analog technologies are used, each where it makes the most sense. Corvette's new I.P. layout was designed to please both traditionalists, and competitive owners.

Instrument panel lighting. Two ultraviolet lights in the instrument panel illuminate graphics on the I.P. for very defined and dramatic lighting that's easy to read.

Optional dual-zone HVAC system (RPO CJ2). The system includes separate temperature controls for driver and passenger, providing increased comfort.

Optional memory package (RPO AAB). This package allows drivers to customize up to 3 different settings for exterior mirrors, radio presets, climate control and driver's seat positions.

. Corvette's removable top features a magnesium frame, which helps make the top lighter and much easier to remove and replace. Latches are simpler and easier to use. No special tool is required.

Side glass. Side glass is 25 percent thicker, helping to reduce transmission of outside noise. Enhanced sealing helps to reduce wind noise.

Steering wheel. A four spoke wheel makes it easier to see the gages.

Storage. Storage areas have been improved. Corvette includes a cupholder and — for the first time since 1993 — a lockable, lighted glovebox. The center console has been redesigned to hold cassettes, CDs, portable phone, sunglasses, etc. The rear cargo area also includes two storage pockets and a large storage well in the center.

Switches and controls. Seat adjustment switches are on the seat, instead of the console. Exit lights help occupants find lock buttons. Important ergonomic changes – such as moving the parking brake lever over to the center console – improve the "user-friendliness" of the interior.

A new wiper control is mounted on the right of the steering column so the driver can use it while maintaining contact with the steering wheel.

SAFETY AND SECURITY

Air Bags. Corvette features standard driver- and passenger-side air bags.

Brakes. Four-wheel anti-lock disc brakes are standard. Corvette's brake rotors are larger for '97 for improved cooling characteristics.

Brake pedal. A new cast aluminum racing-style brake pedal provides a positive feel.

Dealer diagnostics. Technicians can plug in and operate all functions controlled by electronics, making it easier to find and diagnose problems.

Exterior Mirrors. New, larger exterior mirrors increase rearward visibility. A programmable "memory" option accommodates multiple drivers. Mirrors are fold-away for practicality and durability.

Headlamps. Headlamps are now 30 percent brighter. Even the interior of the headlamps underwent styling scrutiny and enhancements. Daytime running lamps are standard.

Rain channels. Rain channels on the roof help keep water from entering the passenger compartment, even during open-window driving in a light rain. Like the wipers, Corvette's rain water management system was developed to meet global requirements for high-speed driving.

Remote Function Actuation (RFA). RFA boasts a new Secure Return feature that allows an approaching driver to turn on interior, back-up and turn signal lamps for a halo lighting effect. Also includes driver activated panic button on key fob, and programmable keyless entry.

Safety belts. Driver and passenger lap/shoulder belts are standard. Safety belt buckles travel with the seats, so customers don't have to search for them.

Security system. Corvette's standard security system monitors the doors and hatch. And, it's programmable. PASS-Key Theft Deterrent is also standard.

Side Guard Door Beams. Tubular side guard door beams help protect occupants in the event of a side impact collision. Energy-absorbing foam in the doors also enhances side impact protection.

Starter saver and battery saver. Since the new Corvette is so quiet at idle, drivers might inadvertently attempt to start the vehicle once it is already running. The starter saver feature prevents this from happening. With the battery saver, the vehicle's on-board computer monitors electrical loads, and shuts off lamps that are left on after a driver exits the vehicle.

Visibility. Corvette's downward vision angle has been increased for better visibility. The end result: Drivers can see more of the road in front of them (18 feet closer to the front bumper) than before.

Windshield. The windshield is more than seven inches forward of the previous generation's design, improving visibility and enhancing the feeling of control.

Wipers. The wipers are tandem, versus a symmetrical wipe pattern, which provides increased coverage for better visibility. Corvette's wipers are capable of moving a larger volume of water off the windshield. The design goal: Provide a system that performs well at Autobahn speeds.

MANUFACTURING

New 1997 Corvette on the assembly line at the Bowling Green, Ky. plant. The Corvette Assembly Plant in Bowling Green, Ky., is one of the most advanced automotive production facilities in existence. Re-built exclusively for Corvettes, the Bowling Green facility uses the latest in computerized manufacturing techniques, including one of the finest paint processes of any GM assembly plant.

Corvette production moved to Bowling Green from St. Louis on June 1, 1981. Since then, the Bowling Green plant has made Corvette history twice - first on October 26, 1983, by producing the 750,000th Corvette, and again on July 2, 1992, by producing the one-millionth Corvette.

Corvette's manufacturing process has been refined to improve quality and consistency even further, car after car. Every major step of the process was reviewed and revised as necessary, from the way parts are received at the plant to the way finished cars are shipped to dealers. The 1997 Corvette is designed to compete in the global marketplace. Constantly refining the manufacturing process is a key to achieve quality levels that are competitive in the world market.

Corvette's assembly process includes:

Reduced part count. Corvette's build process has been simplified for 1997. Engineers reduced parts by 34 percent - today's Corvette requires 1,462 fewer parts than its predecessor.

Hand-crafted body structure. Corvette's frame structure technology employs MIG (Metal Inert Gas) laser welding, performed by skilled craftspeople, instead of the robotic spot welding employed in most plants.

Modular construction. Major items are built off-line; complex sub-assemblies are built as single units away from the assembly line, which gives plant personnel better access to the subassembly, improving quality and simplifying the final build. This process is used for major subassemblies, such as the instrument cluster, dash, windshield, pedal assemblies and steering column. Powertrain, doors and chassis modules are assembled similarly.

Paint process. Body panels remain off the car until late in the assembly process to assure a quality paint appearance. Painting is preceded by a high-tech cleaning in a "clean-room" atmosphere designed to remain dust and contaminant-free. A water-borne paint process is used to minimize environmental emissions and to provide a clear, clean appearance.

Water testing. Before leaving the plant, every Corvette is subjected to a rigorous water-test, which helps ensure each vehicle is free from leaks.

Quality control. The body assembly process is continually monitored by sophisticated laser and photo technology to provide "real time" checks on dimensions, which allows the plant to make necessary adjustments before a vehicle leaves the assembly line. The result: Every Corvette off the line is consistent in quality.

Hydroforming. GM is an industry leader in automotive hydroforming applications. Corvette's hydroformed frame rails represent the largest single hydroformed parts in the auto industry. GM developed the hydroforming press used to create the frame rails, which are formed at GM's Metal Fabrication Division Production Plant in Pontiac, Mich., and then shipped to Bowling Green.

Chevrolet owners are covered by Genuine Customer Care, a comprehensive owner protection plan that includes the following:

BUMPER TO BUMPER WARRANTY

The GM 3-year/36,000-mile (whichever comes first), no-deductible, limited warranty covers repairs for all Chevrolet cars, including labor and parts, to correct any defects in material or workmanship occurring during the warranty period. Warranty features include air conditioning repair, tires, towing, no-cost warranty transfer and 6-year/100,000-mile (whichever comes first) sheet-metal rust-through protection. There is also emissions control system coverage, which varies by geographic location. The only item not covered by the warranty is normal maintenance.

COURTESY TRANSPORTATION

Customers who purchase or lease a Chevrolet car or truck will be able to take advantage of Courtesy Transportation at no additional charge when their vehicles are left at a participating dealership for repairs covered under the 3-year/36,000-mile New Vehicle Limited Warranty.

24-HOUR ROADSIDE ASSISTANCE

Lost? We 値 l help you find your way. Locked out? We 値 l get you back in your Corvette. Out of gas? We 値 l get you gas. Roadside Assistance is provided via a toll-free number (1-800-CHEV-USA) 24 hours a day, 365 days a year. Roadside Assistance is offered in two levels of service, Basic Care and Courtesy Care.

Roadside Basic Care provides:

- Free towing for warranty repairs (to closest dealer)
- Over-the-phone basic technical advice
- Available dealer services at reasonable costs (i.e., wrecker services, locksmith/key service, glass repair, etc.). Roadside Basic Care covers you as long as you own your Corvette.

Roadside Courtesy Care provides all the features of Roadside Basic Care, plus:

- Free towing (to closest dealer)
- Free locksmith/key service (when keys are lost on the road or locked inside)
- Free flat tire service and jump start
- Free fuel delivery on the road. Roadside Courtesy Care is available to you for a period of three years or 36,000 miles (whichever comes first).

GM MOBILITY PROGRAM

Chevrolet/Geo recognizes the importance of mobility to everyone 痴 life and, therefore, offers financial assistance to persons with disabilities through the General Motors Mobility Program This program provides financial assistance -- up to $1,000 -- toward the cost of any aftermarket adaptive equipment for drivers or passengers and/or vehicle "alerting devices" for deaf and hearing-impaired drivers. A special feature of the program is single-transaction GMAC financing for the vehicle and its adaptive aids. Further details are available by calling the GM Mobility Assistance Center at 1-800-323-9935.

1997 Corvette Fifth Gene
Specifications

General

Model No.	1YY07

Body Style	2-Door Hatchback Coupe
Base Price	TBD
Passenger Capacity	2
EPA Vehicle Class	Two-Seater
Primary Structure	Unitized Steel
Body Material	Fiberglass
Weight Distribution (percent front/rear)	51.4 / 48.61
Assembly Plant	Bowling Green, Kentucky

Restraints	**Left**	**Right**
Air Bag	Std.	Std.
Safety Belts	Lap/Shoulder	Lap/Shoulder

Suspension – Front

Type	• Short/long arm double wishbone front suspension

- Forged aluminum upper control arm, cast aluminum lower control

arm

- Transverse-mounted composite leaf springs
- Monotube shock absorbers[2]
- Lubed-for-life ball joints
- Individual wheel height adjusters

Stabilizer bar diam., Base – 19 mm; F45 – 19 mm; Z51 – 21.7 mm

Shock absorber diam., Base – 36 mm; F45 – 28 mm; Z51 – 45 mm

Suspension – Rear

Type
- Short/long arm double wishbone rear suspension
- Cast aluminum upper and lower control arm
- Transverse-mounted composite leaf springs
- Monotube shock absorbers[2]
- Lubed-for-life ball joints
- Individual wheel height adjusters

Stabilizer bar diam., Base – 19 mm; F45 – 19 mm; Z51 – 21.7 mm

Shock absorber diam., Base – 36 mm; F45 – 28 mm; Z51 – 45 mm

Steering

Type: Speed-Sensitive, Power-Assisted, Magnetic Variable Effort	
Ratio	16.1:1
Wheel diam. (in.)	TBD
Turns, lock-to-lock	2.66
Turning diam., curb-to-curb (ft.)	38.5
Turning diam., wall-to-wall (ft.)	40.26

Brakes

Type	Four-Wheel Disc
Anti-lock system (Std.)	Four-Wheel (Bosch ABS V)
Rotor diam x thickness., front (mm)	325 x 32
Rotor diam x thickness., rear (mm)	305 x 26

Swept area, ft./rr. (sq. in.)	TBD	

Wheels/Tires	Front	Rear
Tires, size	P245/45ZR-17	P275/40ZR-18
Tires, mfg./type	Goodyear Extended Mobility Tires	
Wheels, size (in.)	17 x 8.5	18 x 9.5
Wheels, type	Cast Aluminum	Cast Aluminum
Number of studs	5	5
Circle diam., (in.)	TBD	TBD
Spare	N/A	N/A

Engine	
Order Code	LS1
Type	Overhead-Valve (OHV)/Pushrod V8
Displacement (liters)	5.68

Fuel induction system	Sequential Fuel Injection
Horsepower (SAE net @ rpm)	345 @ 5,600
Torque (lbs.-ft. @ rpm)	350 @ 4,400
Block material	Cast Aluminum
Cylinder head material	Cast Aluminum
Valves per cylinder	2
Hydraulic roller lifters	Std.
Roller rocker arms	Std.
Bore x stroke (in.)	3.90 x 3.62
Bore x stroke (mm.)	99.00 x 92.00
Redline (rpm)	6,000
Compression ratio	10.1:1
Cam drive	Chain
Recommended fuel	Premium Unleaded
Emission control system	• Three-Way Catalyst • Air Injection Reaction

	(AIR)	
	• Positive Crankcase Ventilation (PCV)	

Drivetrain

Type	Rear Wheel Drive	Rear Wheel Drive
	Std.	Opt.
Transmission	Hydra-Matic	Borg-Warner
	Rear-Mounted	Rear-Mounted
	4-Speed Automatic	6-Speed. Manual
	w/Overdrive	(T56)
	(4L60-E)	
Order Code	M30	MN6

Gear ratios

1st	3.06	2.66
2nd	1063	1.78

3rd	1.00	1.30
4th	0.7	1.00
5th	–	0.74
6th	–	0.50
Reverse	2.29	2.90
Axle ratio	2.73 (3.15 opt.)	3.42
Final drive ratio	1.91 (2.21 opt.)	1.71

Capacities

Fuel (gal.)	19.1
Engine oil w/filter (qts.)	6.5
Engine coolant (qts.)	11.4
Battery (CCA)	600
Interior passenger volume (cu.ft.)	51.4
Interior trunk volume (cu.ft.)	25

Performance Data

Weight-to-power ratio, auto. trans. (lbs.:hp)	9.4:1
Weight-to-power ratio, man. trans. (lbs.:hp)	9.3:1
Frontal area (sq. in.)	TBD
Coefficient of drag (CD)	0.29
Specific output (hp/liter)	60.53:1

Acceleration

0 - 60 mph, man. trans. (sec.)	4.72
0 - 60 mph, auto. trans. (sec.)	5.05
Top speed (mph)	172
1/4 mile (sec./mph)	13.36 / 109.4
Lateral Acceleration (g)	0.93

Braking

60 - 0 mph (ft.)	125

Fuel Consumption	
Manual Trans. EPA mileage (mpg city/hwy)	18/28 1
Auto. Trans. EPA mileage (mpg city/hwy)	17/25 1
Max. cruising range, man./auto. (miles)	534.8 1 /477.5 1

Exterior Dimensions	
Wheelbase (in.)	104.5
Track, ft./rr. (in.)	62.0/62.1
Length, overall (in.)	179.7
Width, overall w/o mirrors (in.)	73.6
Height, overall (in.)	47.7
Min. ground clearance (in.)	3.7
Overhang, ft./rr. (in.)	38.8/35.7
Trunk liftover height (in.)	36.7

Curb weight, auto. trans. (lbs.)	3,229
Curb weight, man. trans. (lbs.)	3,218

Interior Dimensions

Head room (in.)	37.8
Leg room (in.)	42.7
Shoulder room (in.)	55.3
Hip room (in.)	54.2

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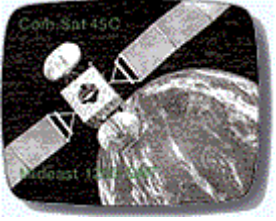
ADVERTISING THE ALL-NEW CHEVROLET CORVETTE



Capitalizing on Corvette "Spies"

WARREN, MI. -- Chevrolet is capitalizing on the intense curiosity surrounding its 1997 fifth-generation Corvette by using a spy theme in its launch advertising, which begins March 7.

The secrecy theme runs throughout TV and print ads, including a unique magazine insert cleverly designed to look like an official Chevrolet dossier of secret 1997 Corvette information.

Spearheading the launch campaign are 30- and 60-second television spots that show industrial spies monitoring the performance of a world-class sports car, only to discover that they have been watching the all-new Corvette that the automotive world has anticipated for months.

"A unique car needs a unique ad campaign," said Corvette Brand Manager Dick Almond. "These ads pass that test. They are well-targeted at auto enthusiasts who have been eagerly anticipating the all-new Corvette."

The 60-second spot will begin airing March 7 on network television and in 2,600 movie theaters across the country. Corvette's high-profile media schedule includes such programs as the NCAA Men's Basketball Tournament and Final Four Championship as well as Academy Awards.

"The theater tie-in is appropriate because we wanted to treat the commercial like a movie trailer -- not as just another ad," said Bill Ludwig, Vice Chairman and Chief Creative Officer of Campbell-Ewald, Chevrolet's advertising agency. "To get that feel, we needed the experience of an actual feature-film director. We found that talent in Andrew Davis, whose credits include The Fugitive and Under Siege."

The major print component of the campaign -- the official looking Corvette dossier -- is designed to pique curiosity. Wrapped in a mini manila file folder with "C5 Limited Access" crudely stamped on its cover, the file contains photos of what appear to be internal documents covering the all-new Corvette's powertrain, performance, structure, materials, suspension and electronics, as well as photos of the car itself.

The dossier-insert has been running in March issues of auto enthusiast and business magazines.

Another print ad -- "Announcing the Death of Speculation" -- was written in conjunction with Corvette Vehicle Line Executive David Hill. The two-page ad completes the story of the new Corvette -- from consumer research to Corvette performance. It will run in the May issue of monthly magazines and in April weeklies.

Other print components of the 1997 Corvette launch include a 44-page dealer showroom brochure and a 120-page collector's issue of Corvette Quarterly magazine. The magazine will be distributed through major bookstore chains across the country, and sent to Corvette owners and prospective owners.

Corvette advertising will also be featured on the Internet revealing far more than the teaser information that was released just prior to the Corvette's public debut at the Detroit and Los Angeles auto shows in January.

"That public unveiling was broadcast live worldwide on the Internet," said Almond. "Our on-line Corvette coverage of the auto show debut generated 17,000 visitors to the Chevrolet website, triple the normal daily volume, and a rate which we were able to sustain for several days thereafter."