

CORVETTE





## 8 CORVETTE COUPE

The handling and performance of Corvette Coupe is uncompromised. Yet the comforts and appointments are luxury-class. It is not surprising that the critics have called Corvette one of the world's best sports cars; nor would it be surprising, once you have experienced the '88 edition, for you to agree with them.



## 16 CORVETTE CONVERTIBLE

There are convertibles, and then there is the Corvette Convertible—basically a formidable Corvette Coupe sans the coupe top. The effect is a perfect balance of open-air exhilaration and performance technology



that belongs only to Corvette. According to the sales figures, there are many drivers who would have their Corvette no other way.

## 20 PERFORMANCE

The king of the production sports cars features a 5.7 Liter V8 with Tuned-Port Fuel Injection, rolls on more aggressive ZR-rated tires and continues to offer phenomenal road-holding ability plus the confident stopping power of the Bosch ABS II anti-lock braking system. The net result is a uniquely American sports car that rewards the driver with full measures of responsiveness and reassurance.



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# CORVETTE MISSION

Corvette, more than any other two-seater, has been the influential sports car of the modern era.

It's a sports car, in short, that has broken the old molds and has triggered brand-new thinking about sports car design.

It's Corvette, from Chevrolet.

Right from the beginning, this decidedly American sports car departed from European tradition. Its 1953 styling was inspired by the avant-garde appearance of General Motors "dream cars." A large in-line six-cylinder engine

Still, Corvette engineers were determined to expand the performance potential of the production sports car. The soon-to-be-legendary small-block V8 found a perfect home in the '55 model. Then, for 1957, the introduction of a 283-cubic-inch version with Ramjet Fuel Injection and a fully synchronized 4-speed manual transmission set the sports car world talking.

1953 Corvette Convertible.



Since 1953, only one sports car has faithfully reflected the American way of driving.

It's a sports car designed for our narrow country roads, city streets, freeway exchanges and horizon-line straightaways.

It's a sports car very deliberately created to satisfy uniquely American needs for power, emotion-stirring style and driving comfort.

and Powerglide automatic transmission combined to provide ample low-end torque and brisk acceleration.

Chevrolet's innovative approach to the art of sports car manufacture also included the use of fiberglass body panels, an integral top boot and a high-style wraparound windshield.

Early road tests confirmed what Chevy engineers suspected and Corvette buyers would soon find out: the unconventional American delivered performance and handling fully competitive with its contemporaries.

1988 Corvette Convertible.



Put them side by side and you can't help but notice vast differences between the first Corvette ever crafted and the 1988 edition. There have been major improvements in engineering, aerodynamics, manufacturing and materials technologies...plus all the minor changes born of 35 years of refining, tweaking and fussing by self-admitted Chevrolet perfectionists.

But both vehicles—and all Corvette models in the intervening years—have ably fulfilled the Corvette Mission: to serve up a uniquely American sports car. It's been—and is—a labor of love.

\*Showroom Stock competition Corvettes are specially modified in accordance with Sports Car Club of America regulations.

World-class performance has always been a part of the Corvette story, but only a part. In the development and refinement of the sports car concept, GM engineers immediately parted company with their European colleagues. While the continental emphasis remained on small-displacement engines and only rudimentary comforts, the Corvette was evolving into a true GT machine. And when service or parts were necessary, they were as close as a Chevrolet dealership. Corvette was also unique among two-seaters for its lengthy list of options including power steering, power brakes, AM/FM radio, air conditioning and even a Tilt-Telescopic steering wheel.

The fact that all these luxuries are commonplace on contemporary sporting machinery of all makes suggests that Corvette, more than any other two-seater, has been the influential sports car of the modern era.

Today, the competition press is talking about the current generation Corvette, a car that has won more SCCA-sanctioned Showroom Stock Endurance races than any other production automobile.\* The technology that makes this Corvette a champion on the track and a legend on the street includes a 5.7 Liter update of the respected small-block V8 with aluminum cylinder heads and Tuned-Port Injection, one of the world's most advanced induction systems. Other technical highlights include a fully independent suspension, track-proven Goodyear Eagle ZR tires and the choice of a 4+3-speed manual transmission or a 4-speed automatic overdrive.

Other features that combine to make the 1988 Corvette a definitive sports car of our own era include a Bosch ABS II anti-lock braking system, Pass Key vehicle security system, an optional suspension with new 17" wheels (16" are standard), lustrous base-coat/clear-coat paint and an aerodynamic shape honed in the General Motors wind tunnel.

# IMPRESSIONS



A quartet of the nation's finest photographers (and Corvette lovers all) capture the excitement and style of America's sports car in a unique exhibit.



Dick Reed



**Peggy Day**



# IMPRESSIONS



Jim Tarcott



There has always been something special about the way Corvette looks. It is a car that tugs on the emotions and won't let go. Magazine editors tell us that a Corvette cover will send newsstand sales soaring. Proud owners have been known to fill albums with Corvette shots, and the fascination extends to posters and toy cars.

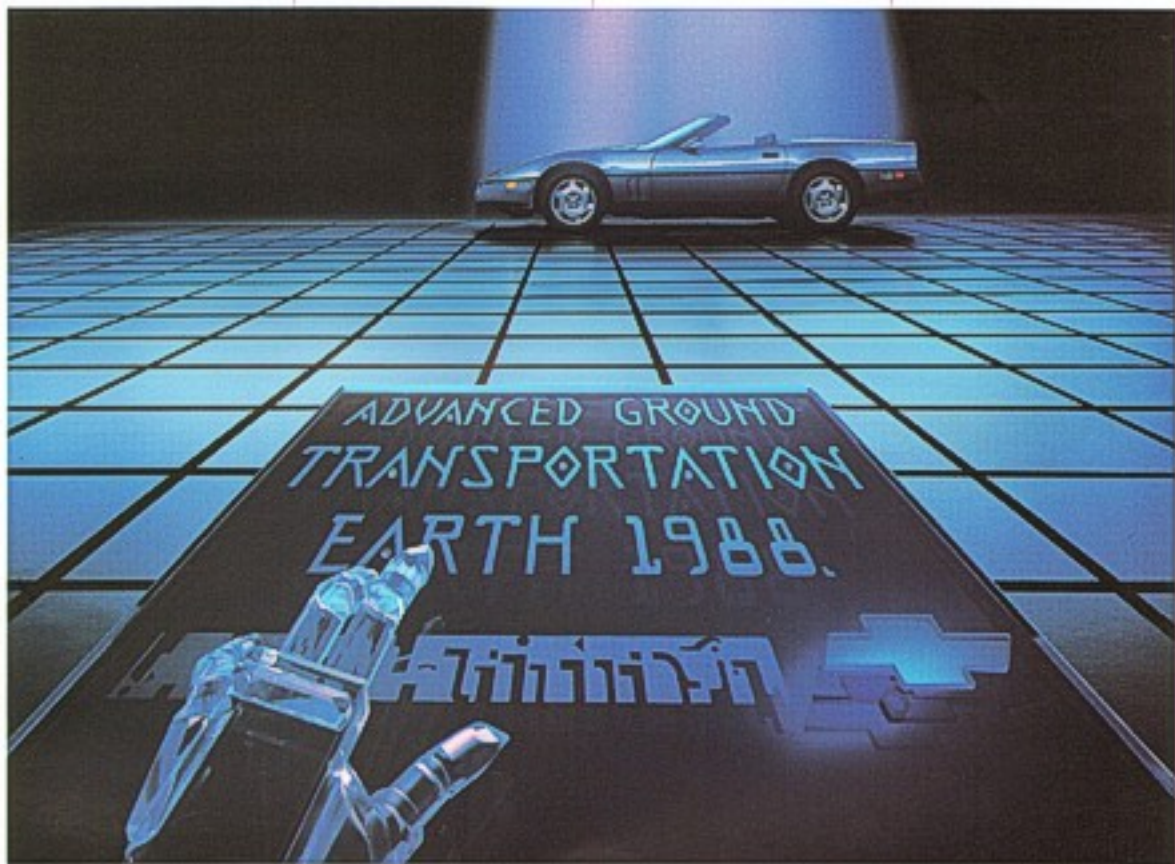
Even the professional automotive photographer gets a special kick from a Corvette "shoot." It's more than an assignment; it's a fun car to work with.

In this spirit, we thought it would be fitting to let four of America's leading professionals take a portrait of Corvette. Layouts were put aside and art directors, who usually supervise the photographer, were shown the door. Then each photographer was given only one guideline—take a picture of Corvette—as you see this car.

It's a unique exhibit. And we think it reflects the visceral excitement of a very personal car, Corvette by Chevrolet.



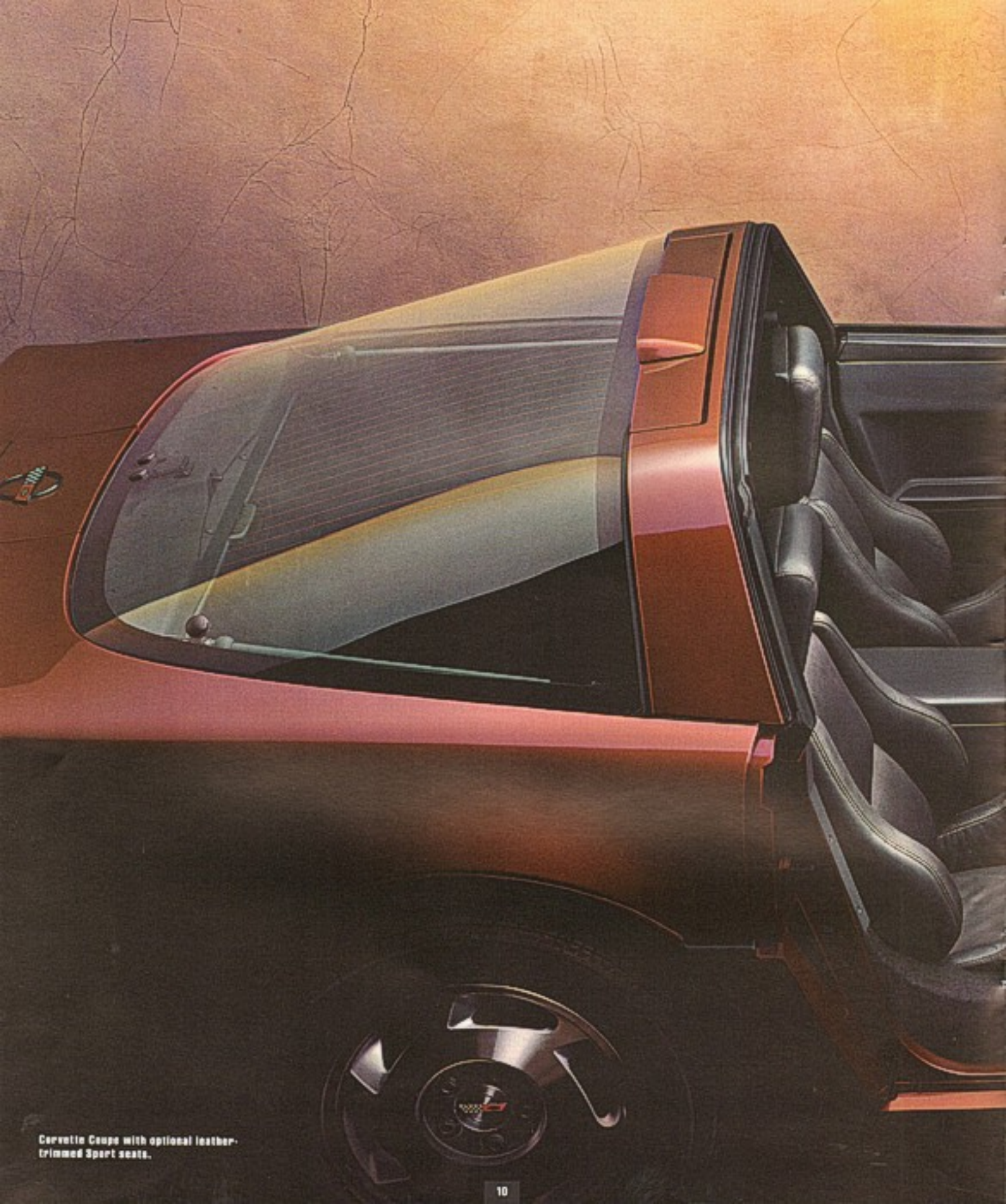
James Kaelor



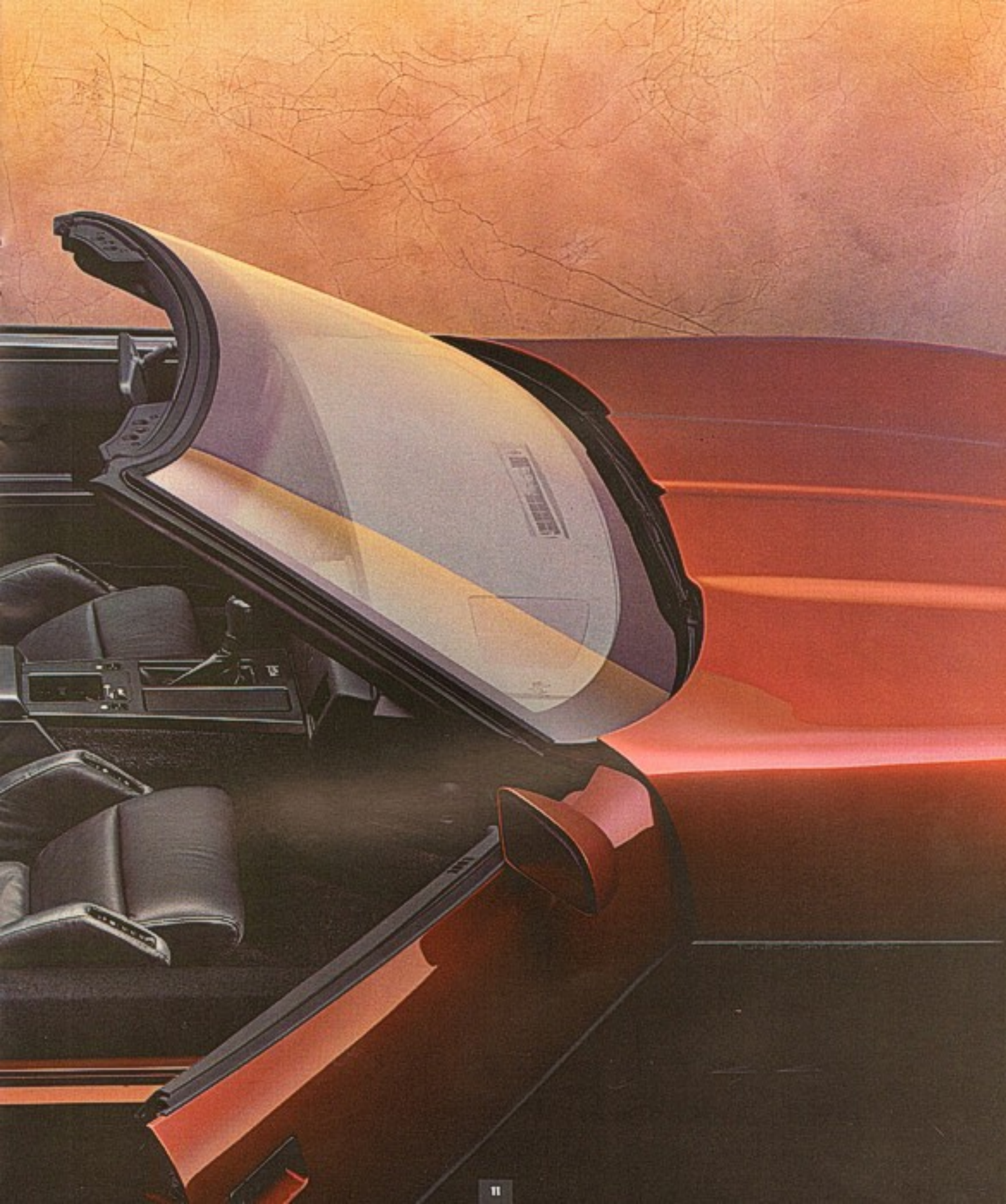
# CORVETTE COUPE







Corvette Coupe with optional leather-trimmed Sport seats.











Corvette Coupe, the grand touring edition of America's exotic car, offers a stunning combination of advanced design, luxurious comfort and outstanding performance. To those who have driven a Corvette, it should come as no surprise that *Car and Driver* has named this car one of the world's "Ten Best" for three years running.

#### EXTERIOR DESIGN

The sensuous shape of Corvette Coupe is unmistakable, from the sweeping hood line to tradition-

#### INTERIOR COMFORT

Presenting an environment of intimate, scientifically shaped comfort for two. Specifies of the Corvette interior:

- Deeply contoured standard Sport Cloth reclining bucket seats with integral head restraints. Leather seat trim optional.
- Optional adjustable Sport bucket seats with integral head restraints (leather trim only).
- Both driver and passenger seats feature power adjustment for lumbar support and backrest

high-beam headlamps.

- Driver information system. Includes average MPG and cruising range in digital readouts.
- Standard air conditioning.
- Standard AM/FM stereo radio with Seek and Scan, cassette tape player, digital clock and four speakers. Or choose the ultimate in automotive music systems, the optional Delco/Bose stereo that is tuned specifically to the interior acoustics of Corvette Coupe.
- Power windows, power door locks and electric mirrors.

technology includes:

- The legendary 5.7 Liter V8 with Tuned-Port Injection, aluminum cylinder heads and a new higher-lift camshaft. For 1988, horsepower increases to 245 at 4300 RPM†
- Standard 4-speed manual transmission with overdrive on the top three gears. Or select, at no extra cost, the 4-speed automatic overdrive.
- Bosch ABS II anti-lock braking system and four-wheel disc brakes.



Corvette instrument panel.

inspired circular tail lamps. Features include:

- A smooth, aerodynamic design perfected in the GM wind tunnel.
- A one-piece removable fiberglass roof panel gives Corvette Coupe the open-air flair of a convertible and the security of a closed car.
- Retractable halogen headlamps and halogen foglamps.
- Lustrous base coat/clear coat paint for a "wet-look" shine.

positioning (requires optional six-way power driver and passenger seat adjustment).

- An instrument panel to please the demanding enthusiast, featuring electronic liquid-crystal instrumentation with multi-colored analog and digital display. Readouts include: speedometer, 6000-RPM tachometer, fuel level, oil pressure, oil temperature plus conventional readouts for odometer, turn signals and

- Tilt-Telescopic steering wheel.
- Intermittent windshield wipers.
- Up to 129 cu. ft. of cargo space.
- Rear underfloor storage compartments (two).

#### CORVETTE TECHNOLOGY

Corvette is America's Showroom-Stock Endurance racing champion. And the precise response and handling that help Corvette capture the checkered flag so consistently also make it a sensational highway performer.\* The

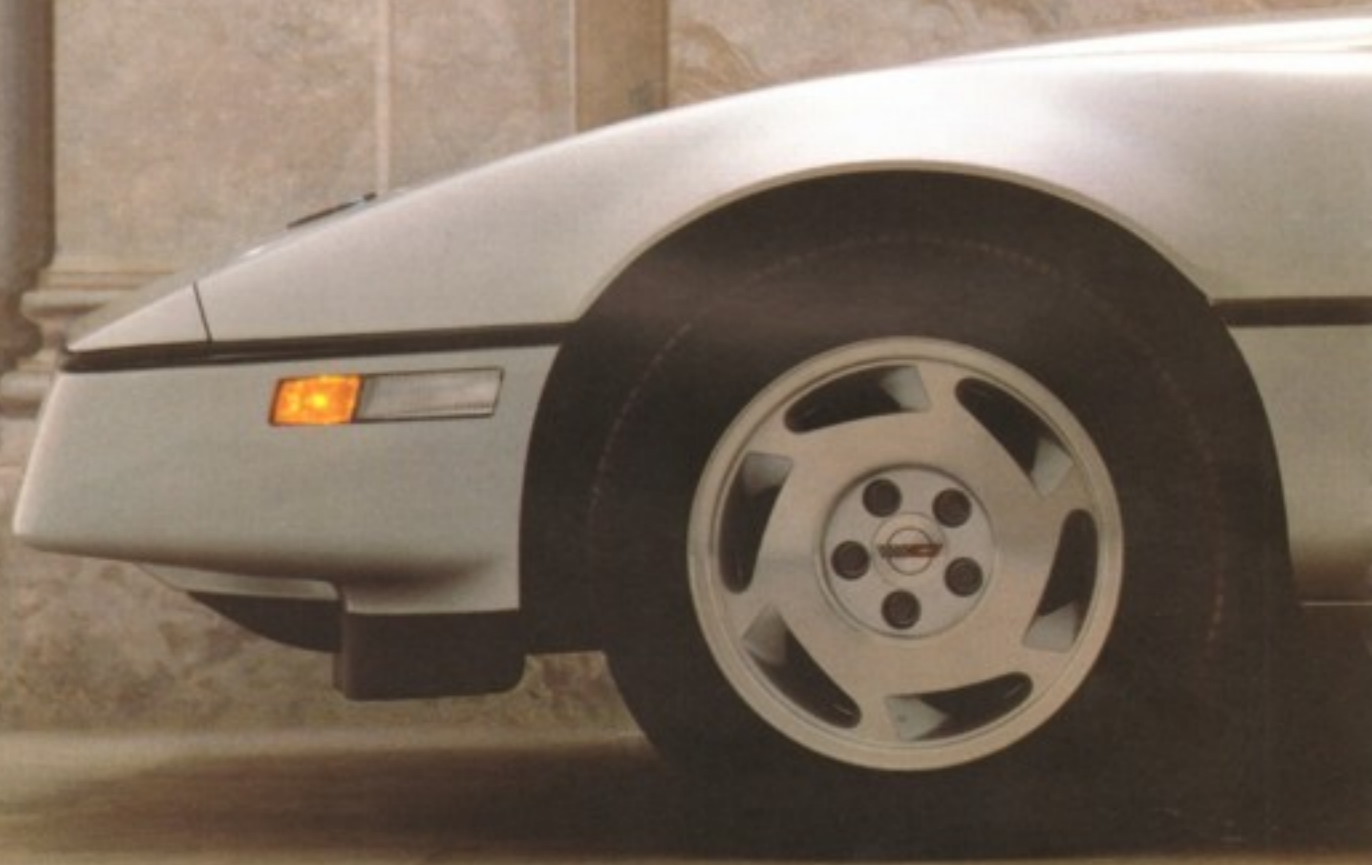
-Independent front and rear suspension with fiberglass transverse leaf springs and forged aluminum A-arms.

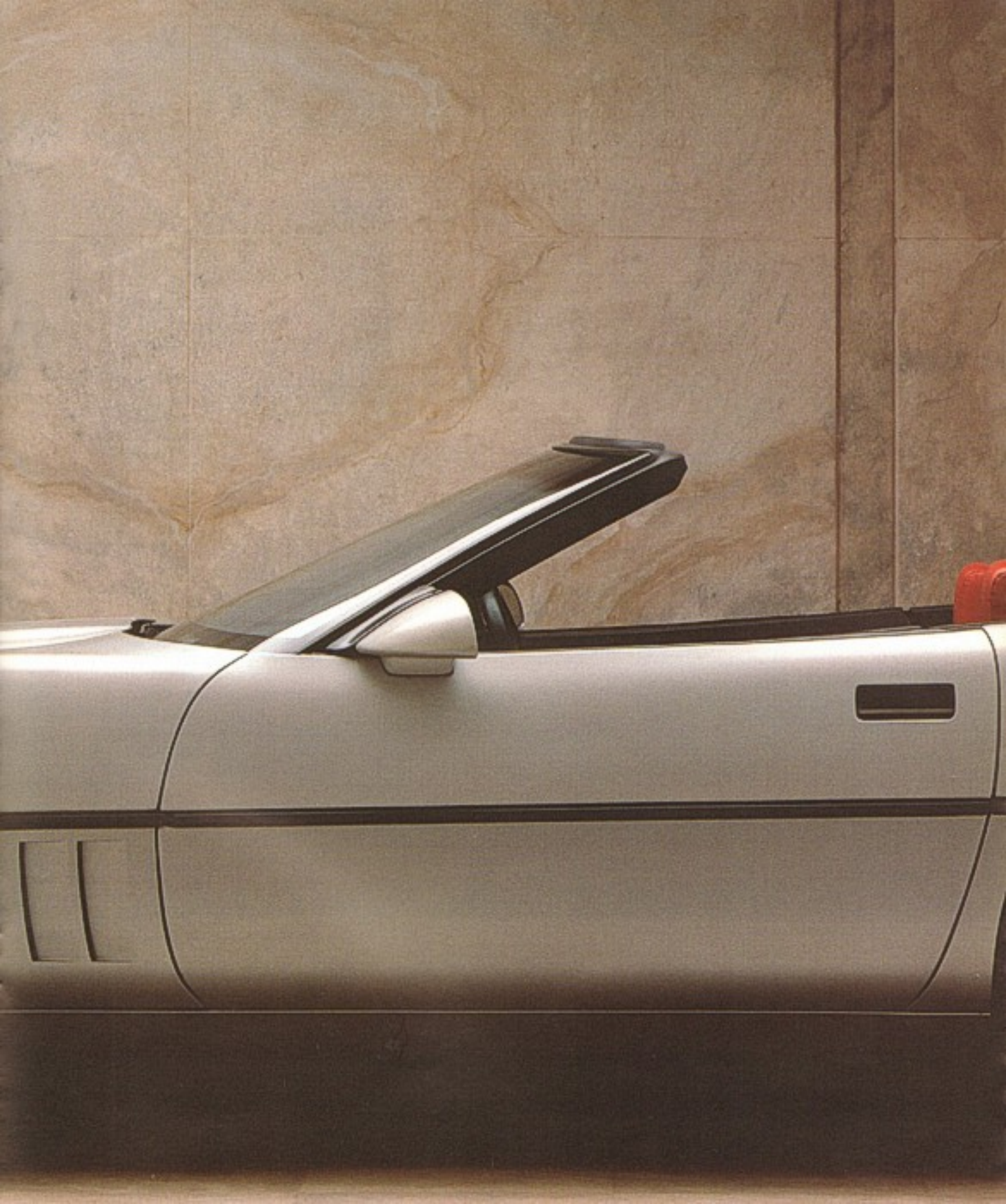
- New standard 16" x 8 1/2" cast-aluminum wheels with P255/50ZR-16 tires.
- New optional 17" x 9 1/2" cast-aluminum wheels with P275/40ZR-17 tires (included with Z51 and Z52 Performance Handling Packages. See page 26 for details).

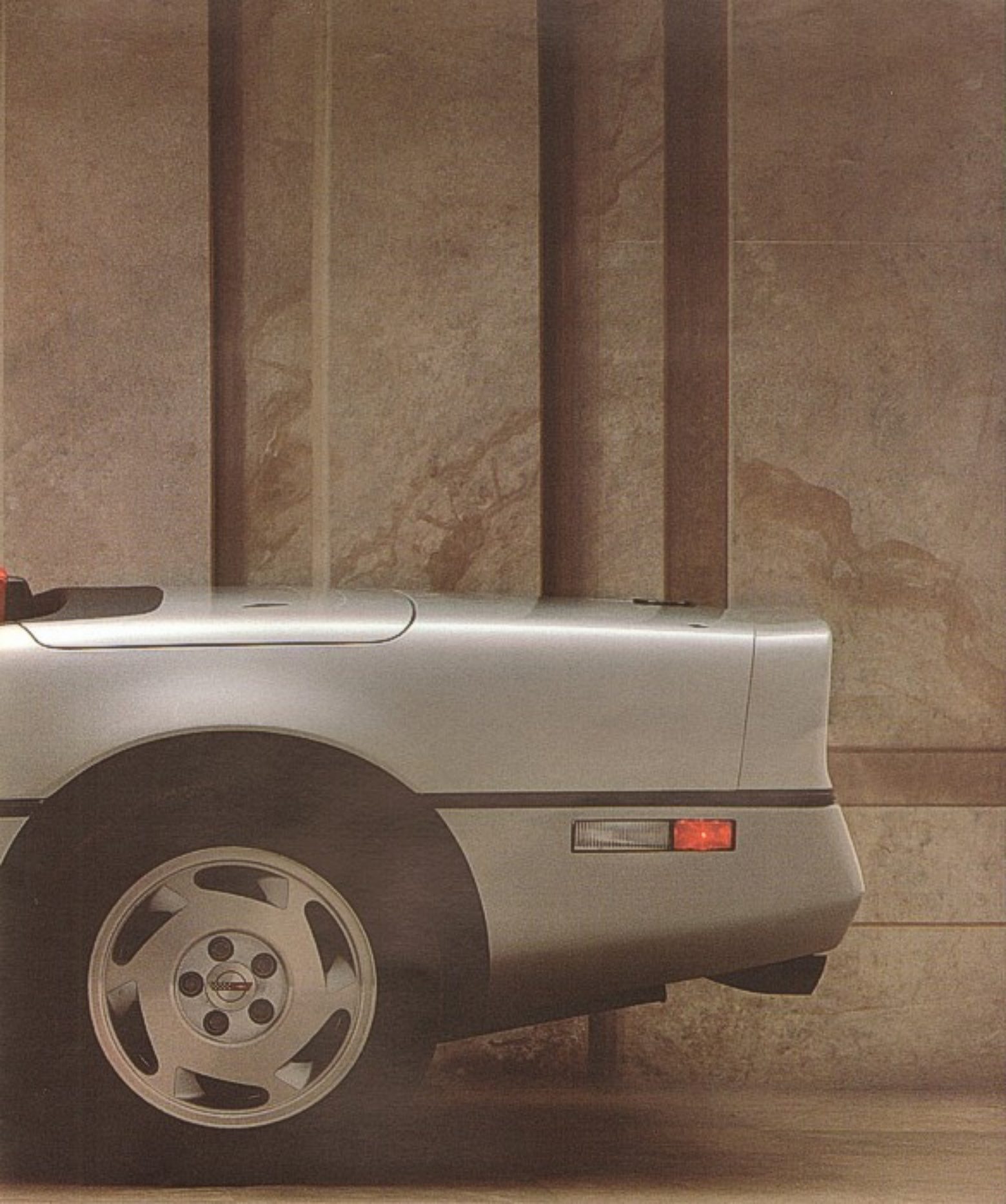
\*Showroom Stock competition Corvettes are specially modified in accordance with Sports Car Club of America regulations.

†210 HP at 4000 RPM on Coupe with 2.50:1 rear axle and all Convertibles.

CORVETTE CONVERTIBLE







To the open car cognoscente, the Corvette Convertible has always presented a singularly seductive motoring experience.

The romance continues with the current-generation Corvette Convertible. The shape is ominously elegant, the performance everything you expect of Corvette. World-class technology has taken tradition and reshaped it for a new generation.

#### UNCOMMON PERFORMANCE

In creating the convertible version of America's own exotic sports car, the Corvette engineering team has allowed no performance compromise.

The result is more than aesthetic triumph; it is a technological tour de force. Features include:

-The 240-HP 5.7 Liter Corvette V8 with Tuned-Port Fuel Injection.

-A choice of 4-speed automatic or 4-speed manual overdrive transmissions.

-Fully independent suspension tuned specifically for the convertible version.

-New standard 16" x 8½" cast-aluminum wheels with P255/50ZR-16 tires.

-New optional 17" x 9½" cast-aluminum wheels with P275/40ZR-17 tires (included with Z52 Performance Handling Package, see page 26 for details).

#### CONVERTIBLE DESIGN SPECIFICS

Significantly, this Corvette has been designed as a convertible.

To ensure the highest quality standards, the Convertible is custom-crafted on a special final assembly line within the Bowling Green, Kentucky, Corvette plant. Features include:

-A manually operated, aerodynamically designed convertible top with headliner and acrylic rear window.

-Three convertible top colors: Black, White and Saddle.

-A covered well into which the top completely disappears. There is no unsightly hoot to mar the top-down appearance.

Certainly, there are other convertibles. But only one so perfectly balances exotic performance with timeless elegance. The convertible Corvette.

**Corvette Convertible's folding top is available in White, Saddle or Black, depending on exterior color selected.**



# PERFORMANCE



Corvette's 5.7 Liter V8 with Tuned Port Fuel Injection delivers 245 HP at 4300 RPM.\*

You'd think a car with a track record like Corvette's might rest on its performance laurels. It hasn't.

## UP TO 245 HORSEPOWER FOR 1988

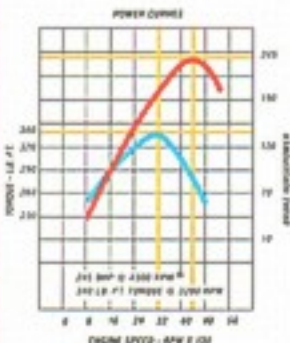
A grand touring automobile deserves no less than a respected, race-proven powerplant. The more powerful 5.7 Liter V8 with Tuned-Port Injection (TPI) is such an engine.

Displacing 5.7 liters (350 cu. in.), the Corvette engine features 90° design, overhead valves and an over-square, short stroke con-

figuration (bore 4.00, stroke 3.48) with a compression ratio of 9.5:1. Copper core spark plugs, low-friction roller valve lifters, ball-tip push rods, one-piece oil pan and one-piece rear crankshaft seal are included, as well as Electronic Spark Control (ESC) to tailor spark advance to the level of octane in the fuel.

TPI is a model of advanced fuel management, featuring eight tuned runners that ram air into the combustion chambers. Individual Bosch injectors spray pulsed charges of fuel directly into the intake ports for dependable cold and hot starts and instant throttle response. An electronic control module receives input from the mass airflow sensor, then adjusts the injector's pulse duration with computer-speed accuracy. This is simply one of the most sophisticated automotive fuel-injection systems there is.

Corvette performance is further enhanced with aluminum cylinder heads and large inlet ports for improved breathing and high compression. For 1988, a new high-lift camshaft helps increase horsepower to 245 at 4300 RPM and torque to 340 at 3200 RPM.\*



As this horsepower/torque chart indicates, Corvette's peak torque of 340 indicates a broad usable power range.

\*245 HP at 4300 RPM and 315 lb. torque at 3200 RPM on Coupe with 2.55 axle and all Convertibles.

## TRANSMISSIONS

This high-output V8 combines with a choice of transmission: standard automatic with 4th gear overdrive or the no-cost-option 4-speed manual. Both the automatic and the manual have oil and water heat exchangers and aluminum transmission housings. Aluminum contributes to rapid heat dissipation. Efficiency of cooling helps protect the transmission oil from degradation that helps protect the bearings, gears and synchronizers.

The standard 4-speed automatic overdrive offers convenience without performance compromise.





Corvette's 4-speed manual overdrive is a no-cost option. This transmission offers the unique flexibility of seven ratios, enhancing both economy and performance.

As with Corvette's other features, the transmissions presume driver control. While the standard automatic shifts itself as smoothly as a dancer executes an arabesque, the driver can dictate precise commands to the manual unit. With overdrive in the top three gears, the manual gives a choise of seven gear ratios so engine speed is optimized, whether powering through a curve, maneuvering through congested city traffic or following those long western straightaways right into the sunset.

#### SUSPENSION COMPONENTRY

Because good manners are always appropriate in a fine sports car, Corvette combines compliant ride characteristics with quick, accurate driver response. The technology that makes this artful balance possible includes fiberglass-composite front and rear transverse springs with computer-selected rates, a rear independent suspension with five-link connections and forged aluminum componentry. Specifications also include power rack-and-pinion steering, an aircraft-inspired "unifram" and new Goodyear Eagle ZR50 tires.



Anti-lock and four-wheel disc brake system help give Corvette the edge in an emergency.

#### UNIFILAME

Computer-aided design rewards the Corvette owner with a strong, lightweight chassis layout. The unifram, or space frame, is made of relatively thin sections of sheet steel spot-welded together. Fiberglass body skins are then bonded to the unifram.

The concept involves marrying the unifram or upper structure and the frame into a single unit. (In earlier designs the upper

structure was perched atop frame rails on rubber body mounts; the current generation Corvette has eliminated this heavy, bulky ladder-type frame.) The result is a stiff structure, contributing to Corvette's phenomenal road-holding ability.

#### BOSCH ABS II 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 rotational 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 rotate too slowly—i.e., if it attempts to lock up or develop too high a slip rate—the ABS II system momentarily releases brake pressure at that wheel. Front wheels are controlled individually; rear wheels as a single unit. When the wheel-speed sensor determines that the wheel is no longer approaching

lockup, pressure is reapplied to maintain braking.

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. When the pedal is pressed hard enough to activate the anti-lock function (pressure hard enough to cause normal brakes to lock up), the driver can feel ABS II pulsing.

The result: (1) A system that prevents flat spotting of tires, while helping assure smooth stops in most types of road conditions. (2) A system that prevents wheel lockup. (3) A system that provides improved braking control even with one wheel on a soft shoulder and the other on firm pavement.

The application of advanced technology has advanced the sports car art to a new level. And the Corvette driver is rewarded with an automobile both responsive and reassuring.

# STANDARD FEATURES

The features that make Corvette one of the world's most completely equipped sports cars include:

## CLOTH BUCKET SEATS

The reclining high-back cloth bucket seats are contoured to provide the feeling of individualized fit and comfort. Other interior features include a leather-wrapped steering wheel, dual rear lockable storage compartments (Coupe only) and lighted visor vanity mirror.



Deeply contoured bucket seats feature adjustable backrests.

## ANTI-LOCK BRAKES

Corvette's standard Bosch ABS II anti-lock brake system uses an electronic sensor to monitor rates of wheel rotation during braking. If a wheel approaches lockup, the control unit releases braking pressure briefly, then reapplies it when traction is regained. Also standard: 4-wheel power disc brakes.

## ANTI-THEFT FEATURES

Pass Key is an important Corvette anti-theft feature. The core of the sophisticated Pass Key ignition key system is a special module with a resistor decoder and an ignition key with a pellet of specified resistance.

An anti-theft horn alarm circuit and starter interrupt are also standard on every 1988 Corvette.



Pass Key is one component of Corvette's comprehensive anti-theft package.

## AM/FM STEREO RADIO WITH CASSETTE TAPE PLAYER\*

This Delco electronically tuned AM/FM stereo music system features Seek and Scan, cassette tape player, digital clock and power antenna.

\*May be deleted for export.



Electronic speed control.

## 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 1-MPH intervals.

## REMOVABLE ROOF PANEL (Coupe)

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 behind in the cargo area in a lockdown position.

## AIR CONDITIONING

This powerful air conditioning system offers improved cooling capacity for 1988.

## GOODYEAR ZR50 TIRES

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



Air conditioning is standard on every Corvette.

## CORVETTE NEWS

This bimonthly publication keeps owners up to date on their favorite sports car. A three-year complimentary subscription goes to every Corvette buyer.

## ADDITIONAL STANDARD FEATURES

- Power Team/Chassis/Mechanical
- Aluminum intake plenum, tuned crossover runner manifold
  - Choice of automatic transmission with overdrive fourth gear or 4-speed manual with an electronic overdrive feature in 2nd, 3rd and 4th gear
  - Center high-mounted stop lamp
  - Computer Command Control
  - Delco Freedom Plus II battery with sealed side terminals
  - Electric engine coolant fan





Corvette Coupe features a standard removable roof panel.

- Electric in-tank fuel pump
- Exclusive transverse front and rear springs with monoleaf glass-epoxy construction
- 5.7 Liter V8 engine with TPI (Tuned-Port Fuel Injection) and aluminum cylinder heads
- Forged aluminum front and rear suspension arms
- Fully independent four-wheel suspension
- High Energy Ignition system
- Hydraulic roller valve lifters and exhaust valve rotators
- Limited-slip differential
- Magnesium engine valve covers
- New 16" cast alloy aluminum wheels, steel compact spare
- Poly-vee single-belt engine-accessory drive belt
- Power rack-and-pinion steering
- Side-lift jack
- Stainless steel exhaust manifolds and free-flow mufflers
- Sturdy uniframe body structure 100% galvanized and dip-painted.

#### 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 (Coupe)
- Front cornering lamps; rear cornering lamps
- Front fender louvers
- Full-tilting clamshell-type hood
- Power-operated quartz-halogen retractable headlamps
- Tinted and flush-mounted glass.

**New 16" cast-aluminum wheels and Goodyear Eagle ZR-rated tires.** These tires were designed specifically for Corvette. They are also "unidirectional." Once mounted, each wheel/tire combination is specific to one side of the car, just like the most sophisticated racing cars.



#### INTERIOR

- Acoustical insulation package
- Air conditioning
- Center console with shifter, coin tray, cigarette lighter and ashtray; plus controls for power window, radio, air conditioning controls and electric mirror controls
- Day/night rearview mirror with integral map lamps
- Deep-twist floor carpeting and stowage area carpet
- Driver information system which provides average MPG and cruising range in digital readouts
- Electronic speed control
- AM/FM Electronically Tuned Receiver (ETR™) stereo radio\* with Seek and Scan, digital clock and four speakers
- Headlamps-on reminder
- High-intensity interior lamps
- Illuminated RH visor vanity mirror
- Intermittent windshield wipers
- Leather-wrapped steering wheel
- Luggage compartment concealment roller shade (Coupe)
- Manual inside hood release
- Power door locks
- Power windows

- Rear underfloor storage compartments (two) (Coupe)
- Side window defogger
- Soft padded and carpeted door panels
- Tilt-Telescopic steering wheel
- Twin underhood lamps
- Ultraccontemporary instrument panel featuring electronic liquid-crystal instrumentation with multi-colored analog and digital display. Readouts include: speedometer, 6000-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.



Tilt-Telescopic steering wheel adjusts to your driving style.



# COLORS

Corvette exterior colors are carefully chosen and painstakingly applied in one of the industry's most advanced paint operations. 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 fully automated four-step process that results in vibrant finishes that display a deep, penetrating shine. Many of these colors, including Corvette Red and Corvette Silver, are unique to Corvette.



Black



Gray Metallic



White



Medium Blue Metallic



Bright Red



Yellow



Dark Blue Metallic



Dark Red Metallic



Charcoal Metallic



Silver Metallic

## INTERIOR COLORS

	Standard Cloth Seat	Optional Leather Seat	Optional Leather Sport Seat
Blue		X	X
Black	X	X	X
Gray		X	X
Red		X	X
Saddle	X	X	X

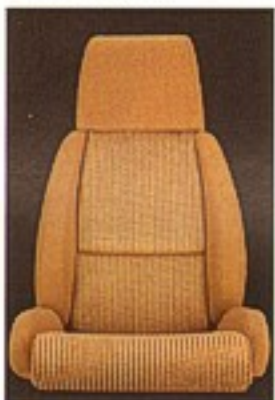
## INTERIOR/EXTERIOR COLORS

Exterior Colors	Interior Colors				
	Blue	Black	Gray	Red	Saddle
Black		R	R	R	R
Blue, Corvette Med. (Met.)	R	R			
Blue, Corvette Dk. (Met.)	R	R			R
Charcoal, Corvette (Met.)			R		A
Gray, Corvette (Met.)		R	R		
Red, Corvette Bright		R	R	R	R
Red, Corvette Dk. (Met.)		R		R	A
Silver, Corvette (Met.)		R	R	R	
White, Corvette	A	A	R	R	R
Yellow		R			A

R Recommended A Acceptable

## STANDARD RECLINING SEAT

The standard reclining bucket seat is designed to be both supportive and comfortable. Choose from rich cloth trim in a choice of Black or Saddle.



## OPTIONAL LEATHER SEAT

Optional leather trim adds even more luxury to Corvette's ergonomically correct seating.

## OPTIONAL LEATHER

### SPORT SEAT

Corvette's optional adjustable Sport bucket seat is available with leather only. Both driver and passenger seats feature full lumbar power adjustment (requires two additional options: power six-way driver and passenger seat adjustment).



# TECHNICAL DATA

## ENGINE

5.7 Liter (350 Cu. In.) V8 with Tuned-Port Fuel Injection  
Block: Cast iron alloy  
Pistons: Impacted cast aluminum  
Camshaft: Steel  
Valve Lifters: Roller-type  
Bore: 4.00" Stroke: 3.48"  
Horsepower: 245 net @ 4300 RPM\*  
Torque: 340 lb.-ft. @ 3200 RPM\*  
Recommended Fuel: Unleaded premium

Fuel Anti-Knock Index (R+M): 93  
2

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 gals.): 29

## TRANSMISSIONS

Standard 4-speed automatic with overdrive and high-stall torque converter.

## RATIOS

1st: 3.06 to 1

2nd: 1.63 to 1

3rd: 1.00 to 1

4th: 0.70 to 1

No-cost-option 4-speed manual with computer-controlled overdrive in 2nd, 3rd and 4th gears.

## AXLE RATIOS

Automatic: 2.50:1 (std. Coupe, 2.73 std. Conv.); 3.07:1 (opt.)

Manual: 3.07:1 (std.)

## SUSPENSION—GENERAL

SHOCK ABSORBERS (front and rear)

TYPE: Base—Direct, double-acting hydraulic with placell expansion bags; deflected-disc. (std. on Convertible)

Optional—Gas pressurized

MAKE: Base—Delco

Optional—Delco/Bilstein

## SUSPENSION—FRONT

TYPE AND DESCRIPTION

Independent, forged aluminum upper and lower control arms and steering knuckle, transverse mono-leaf spring and steel stabilizer, spindle offset.

Spring Type and Material: Mono-leaf, filament-wound glass-epoxy composite.

## SUSPENSION—REAR

TYPE AND DESCRIPTION

Independent 5-link design with toe and camber adjustment, forged aluminum control arms, knuckles and struts; transverse mono-leaf spring steel tie-rods and stabilizer. Tubular U-jointed drive shafts.

Spring Type and Material: Mono-leaf, 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 Braking System: Electronic 4-wheel, 3-channel (standard).

Effective Area cm<sup>2</sup> (in<sup>2</sup>): 174.0 (27.0) front; 117.9 (18.3) rear.

Gross Lining Area cm<sup>2</sup> (in<sup>2</sup>): 174.0 (27.0) front; 117.9 (18.3) rear.

Swept Area cm<sup>2</sup> (in<sup>2</sup>): 622 (96.4) front; 565 (87.5) rear.

Rotors, Outer Diameter: 11.5"

## TIRES AND WHEELS—STANDARD

### TIRES

Size (load range, ply): P255/50ZR-16 B/W.

Type: High-speed steel-belted radial Eagle ZR50 unidirectional (Goodyear).

Inflation Pressure (cold) for Maximum 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: T155/80D-16, 16 x 4 steel wheel.

Position: Horizontal under fuel tank.

TIRES AND WHEELS (optional Z51 and Z52 Handling Packages)  
Size (load range, ply): P275/40ZR-17 B/W.

Type: High-speed steel-belted radial Eagle ZR40 unidirectional (Goodyear).

Wheel (type and material): Left-right aluminum alloy road wheels with specific vent design.

Rim (size and flange type): 17 x 9.5 front; 17 x 9.5 rear.†

Spare Tire and Wheel: T155/70D-17 (aluminum 17 x 4 wheel with Power Seat Options RPO AC1 and AC3).

### STEERING

Power: Standard.

Adjustable Steering Wheel: (Standard) Black-leather-wrapped two-spoke steering wheel; Tilt-Telescopic.

Turning Diameter: 40.4 ft.

Steering Type: Alloy rack-and-pinion.

Overall Ratio: 15.6:1 base; 13.0:1 Z51 and Z52 Handling Packages.

## 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

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: FR5LS

Gap: .89mm (0.035 in.)

## BODY

### STRUCTURE

Integral perimeter-frame bridge forms unitized body structure.

### ANTI-CORROSION TREATMENT

All-encompassing corrosion protection including extensive use of aluminum; galvanization; use of specially treated fasteners; 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.

Hatch Type: Hinged clamshell hood.

Hatchback Lid: 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: 46.7" (46.4" Conv.)

Minimum Ground Clearance: 4.7"

### INTERIOR

Head Room: 36.4" (36.5 Conv.)

Leg Room: 42.6"

Shoulder Room: 54.1"

Hip Room: 49.3"

Cargo Volume: 7.9 cu. ft. (6.6 cu. ft. Conv.)

Curb Weight: 4-speed manual: 3,233 lbs., (3,294 lbs. Conv.)

Automatic: 3,237 lbs. (3,298 lbs. Conv.)

\*248 HP at 4000 RPM and 337 ft.-lbs. torque at 3200 RPM on Coupe with 2.50 axle and all Convertibles.

†Five chains should not be used with 9½ inch rear wheels because they may cause damage to this vehicle.

# OPTIONAL EQUIPMENT

In keeping with tradition, the 1988 Corvette may be tailored to your exact tastes and requirements. First, choose Coupe or Convertible. Then select the optional equipment you desire from the following list. It's as simple as that.

## LEATHER SPORT SEATS

The Sport seat features leather seating surfaces and power adjustments of upper side bolsters, lumbar support and back-angle adjustment. See page 24 for further information.



Leather-trimmed Sport bucket seats feature a multitude of adjustments for precise comfort.

## ELECTRONIC AIR CONDITIONING

This electronic control system features easy-to-use, color-coded push buttons and a digital temperature adjuster. Once set, the temperature is automatically maintained. An optional display registers outside air temperature.



Electronic air conditioning allows exact digital temperature control.

## Z51 PERFORMANCE HANDLING PACKAGE

One of the reasons for Corvette's winning record in SCCA sanctioned showroom-stock racing is the track-tested capability of the Z51 Performance Handling Package. Z51 equipment includes:

- 17" x 9 1/4" cast-aluminum wheels with P275/40ZR-17 Goodyear Eagle tires.\*
- Heavy-duty front and rear springs and stabilizer bars.
- Delco/Bilstein gas-charged shock absorbers.
- Heavy-duty brakes.
- Radiator boost cooling fan.
- Fast-ratio steering gear (13:1)
- 3.07:1 rear axle ratio.
- 8 1/2-inch ring gear.
- Engine oil cooler.
- Power steering cooler.

The Z51 Performance Handling Package is available on Corvette Coupe with manual transmission only. Recommended for specialized use, as you may consider the ride too harsh for everyday use.



## Z52 SPORT HANDLING PACKAGE

For the serious enthusiast, the Z52 package includes:

- 17" x 9 1/4" cast-aluminum wheels with P275/40ZR-17 Goodyear Eagle tires.\*
- Delco/Bilstein gas-charged shock absorbers.
- Fast-ratio steering gear (13:1).
- Engine oil cooler.
- Heavy-duty radiator.
- Radiator boost cooling fan.
- Reinforced front body structure.

The Z52 Sport Handling Package is available on both Coupe and Convertible models.

\*Tire chains should not be used on Corvettes with P275/40ZR17 tires because they may cause damage to this vehicle.

Both Z51 and Z52 handling packages feature new 17" cast-aluminum wheels and new P275/40ZR-17 Goodyear Eagle unidirectional tires.\*

## ADDITIONAL OPTIONAL EQUIPMENT

- Axle Performance Ratio (automatic transmission only)
- Defogger System. Includes rear window defogger and heated outside rearview mirrors (Coupe only)
- Engine Oil Cooler
- Heated Outside Rearview Mirrors (Conv. only)
- Mirror, Driver's Side (illuminated visor vanity)
- Radiator Cooling Boost Fan
- Radiator, Heavy-Duty
- Roof Panel: (Coupe only) Blue Tint, Transparent Lift-Off Bronze Tint, Transparent Lift-Off Dual Removable (transparent and fiberglass)
- Seat Equipment:  
Leather-Trimmed Reclining Bucket Seat with Integral Head Restraint, Power, Six-Way, Driver Side Seat, Power, Six-Way, Passenger Side (requires power driver's seat)

**DELCO/BOSE  
FOR MUSIC TUNED TO YOUR  
CORVETTE**

The Delco/Bose stereo, available as a factory option on both 1988 Corvette Coupe and Convertible models, offers sound so real that it's been rated by experts as one of the best stereo systems available in a production automobile. Delco/Bose performance rivals the most expensive home stereos, because it is tailored exactly to

the acoustics of Corvette.

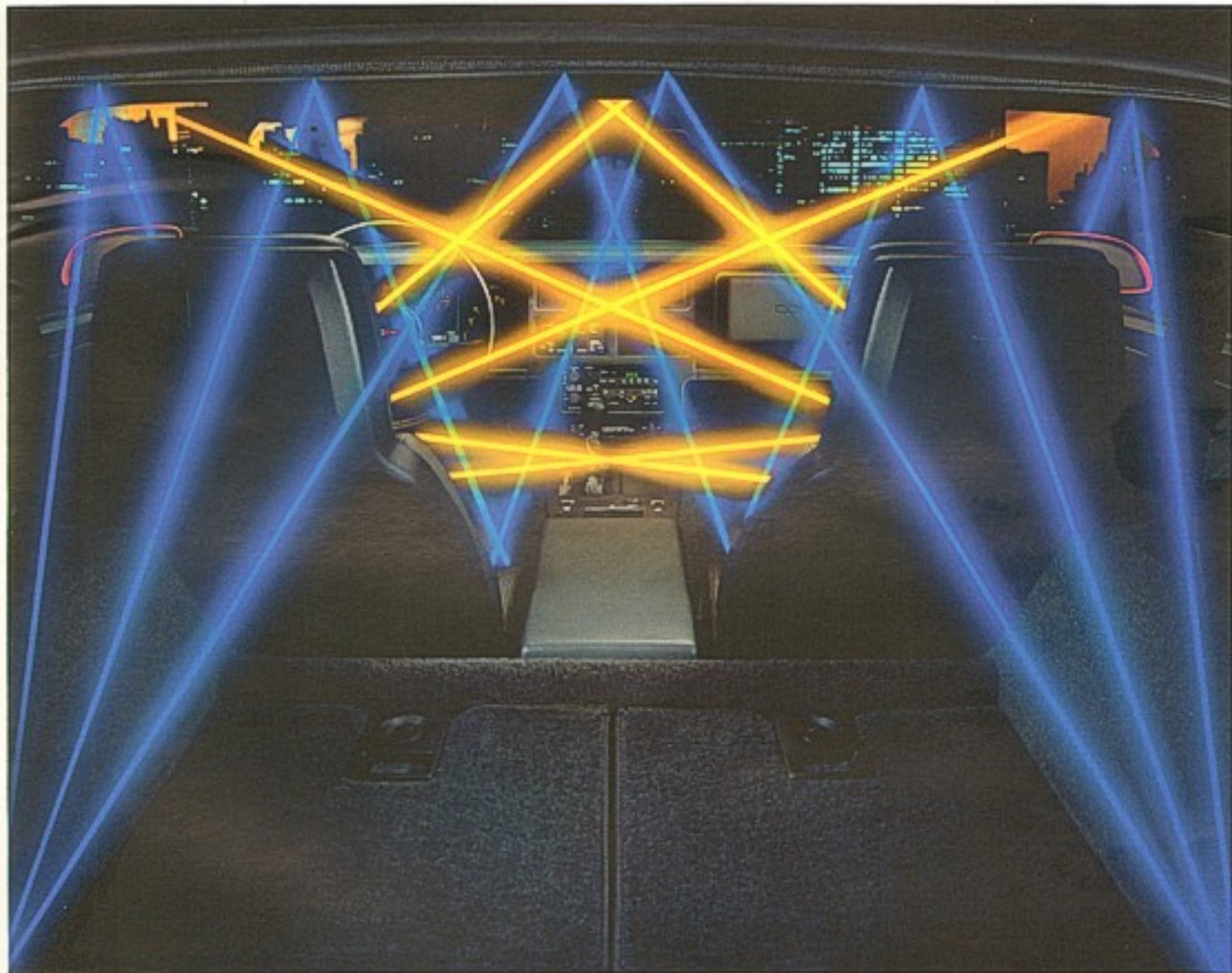
The Delco/Bose Music System is composed of a receiver and four bass reflex amplifier/speaker enclosures engineered specifically for window placement, angle and density of glass, seating position and cockpit configuration. Even the textural composition of the upholstery and carpeting was considered. Each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

Other features of the system

include: AM/FM stereo reception with automatic adjustment. Circuits that adjust reception, assuring maximum sensitivity to weak stations without danger of overload on strong signals. Electronic tuning with Seek and Scan features. Seek button that changes stations electronically. Scan button that automatically samples all clear radio signals for five seconds each. Digital VF (Vacuum Fluorescent) readouts of

time or radio frequency. Dynamic Noise Reduction (DNR™) and Dolby® Sound Noise Reduction to reduce high-frequency "hiss" on AM, FM and cassette tape. Integral tape player with auto-reverse and music search features. Also included: 100 watts of power. Four separate speaker enclosures. Separate treble and bass controls. Computer-balanced, wraparound sound.

\*Dolby® is a registered trademark of Dolby Laboratories.



The acclaimed Delco/Bose music system adds fabulous concert-hall sound to the 1988 Corvette.

#### SAFETY FEATURES OCCUPANT PROTECTION

- Manual lap/shoulder safety belts for driver and right front passenger, driver side includes visual and audible warning system
- Energy-absorbing steering column
- Energy-absorbing instrument panel
- Laminated safety windshield glass
- Safety interlocking door latches
- Side-guard door beam
- Passenger-guard inside door lock handles
- Safety armrests
- Head restraints, driver and right front passenger (adjustable).

#### 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 defroster, washer and pulse-type wipers
- Inside rearview mirror
- Outside left and right rearview mirrors
- Brake system with dual master cylinder and warning light
- Starter safety switch
- Low-glare finish on inside windshield moldings, wiper arms and 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
- Pass Key vehicle anti-theft system
- Audio alarm system with starter-interrupt feature
- Locking roof panel with theft-deterrent mount (Coupe only)
- Theft-deterrent wheel lugs.

#### 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.

#### CHEVROLET'S BEST PROTECTION PLAN EVER

A 6-year/60,000-mile warranty demonstrates the confidence Chevrolet has in Corvette quality. This new limited warranty covers powertrains for 6 years/60,000 miles and includes 6-year/100,000-mile rust-through protection. See your Chevrolet dealer for the terms and conditions of this limited warranty.

The 1988 Corvette is designed and built to resist corrosion. Application of additional rust-proofing is neither necessary nor required.

#### GM PROTECTION PLAN

The GM Protection Plan offers service protection in addition to that provided by GM's new-vehicle limited warranty. Ask your dealer about it. Coverage available only in U.S. and Canada.

#### 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 vehicles or equipment, or to meet federally mandated emissions, safety and fuel economy requirements, or for other reasons, to produce Chevrolet products with different components or differently sourced components than initially scheduled. All such components have been approved for use in Chevrolet products and will provide the quality performance associated with the Chevrolet name.

With respect to extra-cost optional equipment, make certain you specify the type of equipment when ordering it 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 the optional equipment you ordered or, if there are changes, that they are acceptable to you.

#### A WORD ABOUT ENGINES

Chevrolts are equipped with engines produced by GM or suppliers to GM worldwide.

#### A WORD ABOUT UPDATED SERVICE INFORMATION

Chevrolet regularly sends its dealers useful service bulletins about Chevrolet products. Chevrolet monitors product performance in the field. We then prepare bulletins for servicing our products better. Now you can get these bulletins, too. Ask your dealer. To get ordering information, call toll-free 1-800-551-4121.

#### MORE DEALERS TO

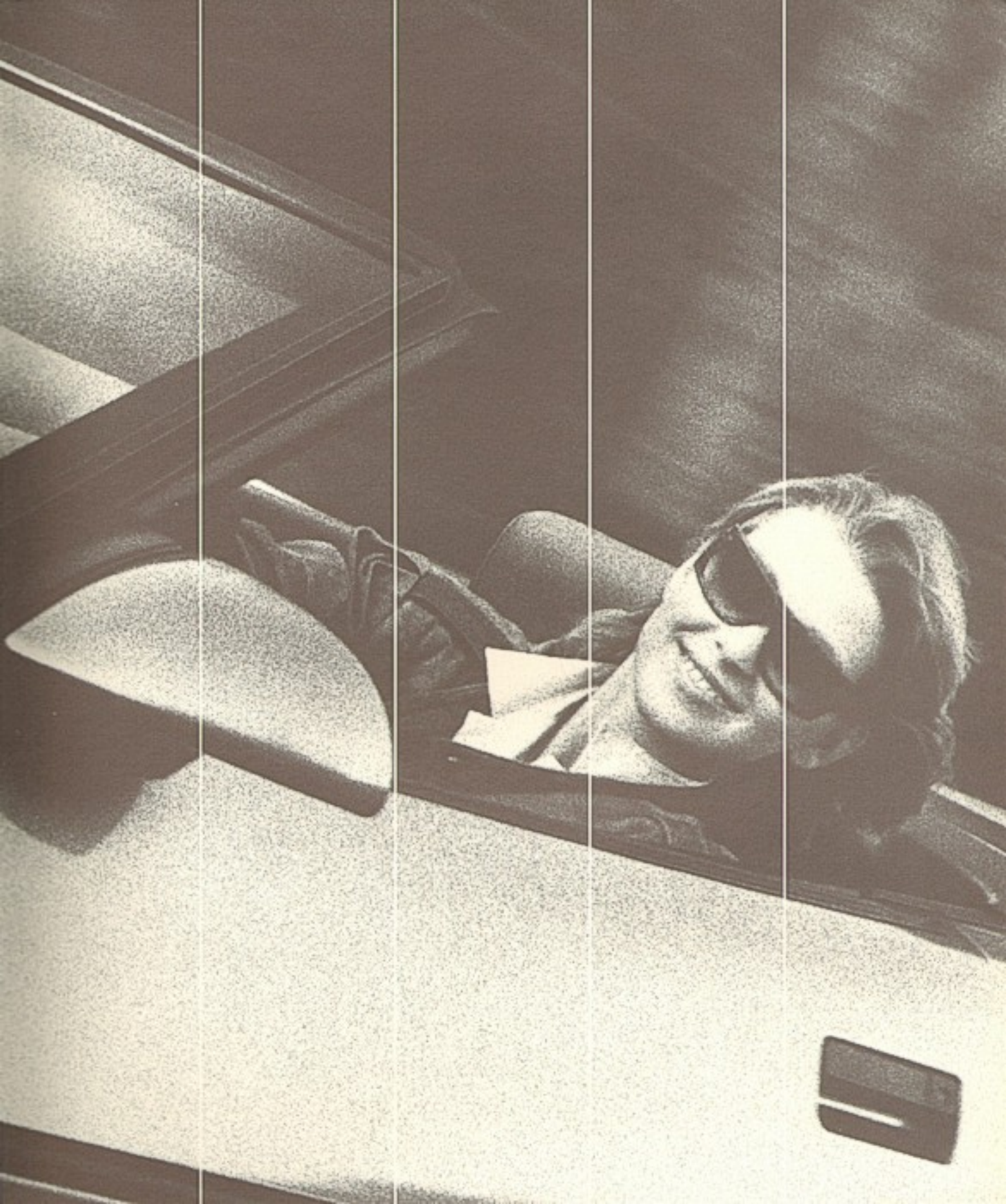
#### SERVE YOU


With nearly 5,000 servicing dealers nationwide, Chevrolet offers a more extensive parts/service network than any other automaker.

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

Let's get it  
together.  
buckle up







THE  
HEARTBEAT  
OF  
AMERICA.  
TODAY'S CHEVROLET







# ADVANCEMENTS

CHEVROLET ADVANCED TECHNOLOGY IN APPLICATION

**Corvette Indy  
88/1**



Chemistry Corvette Indy is the latest of a long line of Corvettes, each with its own leading studies. And the reality that prevailed is, Corvette Indy is introduced as Chevrolet's latest technological and technical study of engineering and design.

**Corvette's Mid-Engine History**

In 1958 Chevrolet engineers began work on a small sport-oriented car design to coincide with the engine-fueled race to be built for Indianapolis. The project was organized to create the vehicle designed and performance requirements of a mid-engine sports configuration. It was only called a Chevrolet Experimental Racing Vehicle (CERV) for a short time but the results of it are still remembered and discussed. It is now in a museum at the GM's Mid-Engine History Center. Introduction of the mid-engine mid-engine sports car. Chevrolet Experimental CERV was built by Chevrolet Engineering Research Center. Designing by means of a variety of engineering, CERV is also used to discuss such design as high speed handling dynamics, powertrain, chassis, suspension, steering, and drivetrain. CERV is also used to discuss such design as high speed handling dynamics, powertrain, chassis, suspension, steering, and drivetrain. CERV is also used to discuss such design as high speed handling dynamics, powertrain, chassis, suspension, steering, and drivetrain.



...any speed involving the application of high strength, light weight materials is possible.

**The Newest Mid-Engine Corvette**

Now, Chevrolet is introducing the Corvette Indy, the latest Chevrolet sports car. It is the same as the original CERV but with a larger engine and a more powerful body.

**Experimental V8 Power**

...to be built with a mid-engine V8 engine and a more powerful body.

...to be built with a mid-engine V8 engine and a more powerful body.



...to be built with a mid-engine V8 engine and a more powerful body.

Hydraulic drive structure. The hydraulic drive system is a... to be built with a mid-engine V8 engine and a more powerful body.

The light weight alloy... to be built with a mid-engine V8 engine and a more powerful body.

**New Structure, New Materials**

...to be built with a mid-engine V8 engine and a more powerful body.

The body is made... to be built with a mid-engine V8 engine and a more powerful body.

...to be built with a mid-engine V8 engine and a more powerful body.

**AD Wheel Drive**

...to be built with a mid-engine V8 engine and a more powerful body.

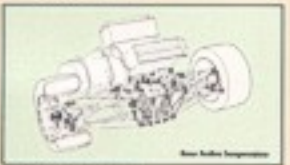
...to be built with a mid-engine V8 engine and a more powerful body.



...to be built with a mid-engine V8 engine and a more powerful body.

**Active Suspension**

...to be built with a mid-engine V8 engine and a more powerful body.



...to be built with a mid-engine V8 engine and a more powerful body.

**4-Wheel Steering**

...to be built with a mid-engine V8 engine and a more powerful body.

...to be built with a mid-engine V8 engine and a more powerful body.

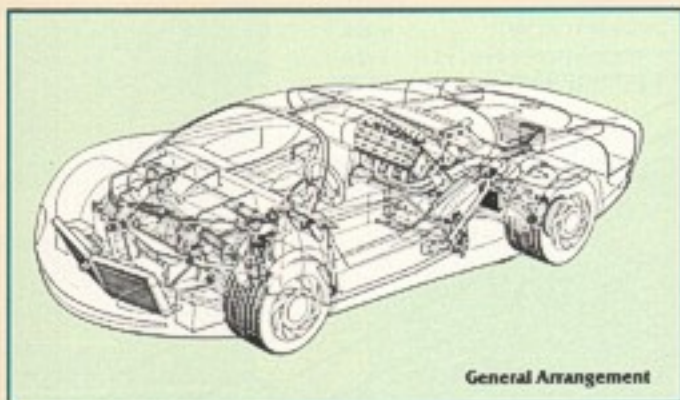
Chevrolet's Corvette Indy is the latest of a long line of Corvette research vehicles and styling studies. Like the models that preceded it, Corvette Indy is introduced as Chevrolet's latest research vehicle for studying new concepts of engineering and design.

### Corvette's Mid-Engine History

In 1959 Chevrolet engineers began work on a small open-wheeled car design to conform with the regulations then in force for Indy-car racing. The project was organized to explore the vehicle dynamics and performance characteristics of a mid-engine vehicle configuration. Officially named Chevrolet Experimental Racing Vehicle One, or CERV 1, the single-seat car rode on a 96-in. wheelbase and measured 172-in. nose-to-tail. Before the public introduction of the car, Chevrolet redesignated CERV to stand for Chevrolet Engineering Research Vehicle. During its tenure at Chevrolet Engineering, CERV 1 was used to evaluate such things as high speed handling dynamics, positive-displacement mechanical superchargers, twin turbocharging systems, advanced technology competition tires, and multi-point fuel injection systems. Before it was retired in 1972, CERV 1 had lapped a closed course circuit at a measured 206 mph.

The open-wheeled CERV 1 was followed by CERV 2 in 1964. The newer car also had its engine positioned amidships. But while the original CERV was a single-seater with an open body, CERV 2 was designed as a 2-seater with full envelope bodywork. Chevrolet engineers had their eyes on the 24 hour LeMans endurance race when pen went to paper designing CERV 2. This newer vehicle was the world's first mid-engined car to be equipped with full-time 4-wheel drive. CERV 2 also continued the tradition of component and systems development of the first CERV, with the all-wheel-drive roadster used to evaluate high torque capacity automatic transmissions, low profile tires, anti-lift front suspension geometry, aluminum cylinder block design and construction, as well as 3-valve per cylinder engine technology.

Another mid-engine Corvette, the Corvette XP-882, appeared in 1970. This 2-door coupe was obviously a Corvette, but with new proportioning. XP-882 was also the first mid-engine sports car to position a V8 engine transversely between the rear wheels. A variant of XP-882, incorporating a radical aluminum structure, was dubbed Corvette XP-895. This ver-



General Arrangement

sion was used to study the application of high-strength, light-weight materials in passenger cars.

The Corvette concept achieved new heights with the introduction of the Aerovette. Like XP-882 and XP-895, the Aerovette was powered by a transverse mounted Chevy V8 engine. This 1977 show vehicle was one of the first cars to employ electronic instrumentation. Another striking feature of the Aerovette was the car's unique double-hinged gull-wing door design.

### The Newest Mid-Engine Corvette

Now, Chevrolet is developing the Corvette Indy, the newest Corvette research vehicle. As was the case with CERV 1 and 2, the Corvette XP-882 and XP-895, the Corvette Indy will be used by Chevrolet engineers to study next generation technologies for systems, structures and components for future Chevrolet vehicles.

### Experimental V8 Power

Behind its leather-trimmed passenger compartment lurks the all-aluminum heart of Corvette Indy — an experimental 350 cubic inch V8. Code named 350/32, it is a high-output, dual overhead camshaft, 32-valve, sequentially fuel-injected engine displacing 5727cc.

Engineered specifically for transverse applications, the engine employs four valves per cylinder for efficient combustion chamber air flow. Alloy cylinder heads feature two chain-driven camshafts per bank and narrow-angle pent-roof combustion chambers. The design incorporates self-adjusting hydraulic valves and a



hydraulic chain tensloner. The induction system employs 16 runners (one to each intake valve) for optimum torque delivery. Sixteen Rochester Multec fuel injectors are positioned in the manifold, near the intake valves. They are triggered sequentially for more efficient combustion.

The light-weight alloy cylinder block of the 350/32 has NIKASIL-coated wet aluminum liners in each bore. Main bearing caps are of iron construction. Low-mass aluminum pistons are crowned for good combustion. The extensive use of aluminum alloys offers lower mass and superior heat dissipation, while enhancing torsional stiffness. Torsional rigidity is especially important since the powertrain in the Corvette Indy is a stressed member of the vehicle structure. Because the engine is an integral part of the vehicle structure, it is fitted with a cast alloy oil pan that incorporates the lower attachment points for the car's rear suspension. As designed for transverse installation, the 350/32 spins out an impressive 380 hp @ 6000 rpm, and yields a torque output of 370 lb-ft @ 3800 rpm.

### New Structure, New Materials

Unlike the regular production Chevrolet Corvette, which uses fiberglass body panels over a stamped steel structure, the Corvette Indy is built off of a carbon fiber torque tube "backbone". This filament-wound

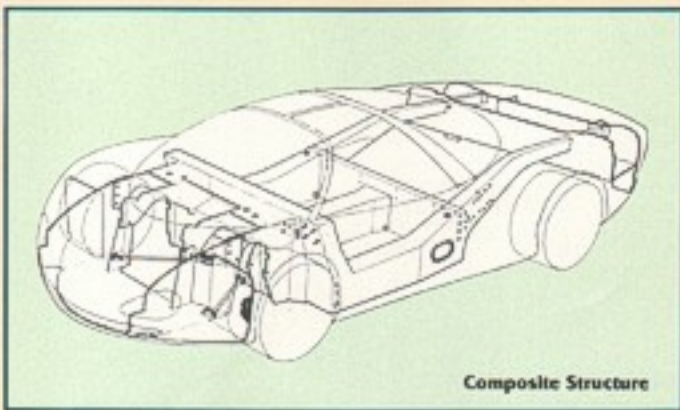
the scales at nearly 111 pounds. But the lightweight carbon fiber structure is considerably stronger than steel. The backbone structure of the Indy can sustain stresses of nearly 166,000 pounds per square inch (psi). For comparison, a steel tube of similar size would fail at 35,800 psi.

A body platform is attached to this backbone structure. Carbon fiber/No-mex composite construction was selected to achieve high strength with ultra-low mass. In the body platform structure, the use of composites provides a weight advantage of approximately 2.5:1 over conventional steel. As an additional benefit, these plastic and graphite materials are immune to corrosion from road salts and sands. The flat panels of the body platform are fabricated in a plywood assembly jig. Any part of the body platform where highly-loaded mechanical fasteners will be located, is reinforced during the assembly stage with aluminum inserts.

Stiffness, and low mass were also high-priorities, along with resistance to corrosion, for the selection of outer body panel materials. The body skins of the Corvette Indy are made of various materials since performance requirements vary from panel to panel. Fiberglass, fiberglass/carbon fiber and fiberglass/carbon fiber/No-mex sandwiches are used depending on location on the car.

### All-Wheel Drive

Power from the twin-cam V8 is delivered to all four wheels through a torque-split box. Unlike off-road applications, the Corvette Indy system has been designed for use in all driving conditions on paved surfaces. Tractive forces from the engine are delivered to the front through an intermediate differential, then to a third differential located between the front



Composite Structure

beam connects the front suspension to the engine/rear-suspension assembly. High modulus carbon fibers are wound at optimum angles for different modes of stiffness. The resultant rectangular beam weighs slightly less than 45 pounds, while a steel tube of equivalent strength would tip



wheels, then via half-shafts to the front wheels. Power is transferred to the rear wheels from the transaxle through a set of half-shafts. Speed differences between the front and rear wheels are minimized through the use of a viscous coupling in the transmission splitter. As the Corvette Indy is currently set-up, the transmission splitter has been set to send 35% of the engine torque to the front wheels with the remaining 65% to the rear. This has been chosen to optimize front and rear traction on dry roads, as well as minimize variations in steering feel that may be brought about by throttle position changes. Acceleration and handling enhancements under very high power are being studied with all-wheel drive.

### Active Suspension

Corvette Indy is equipped with a radical new suspension system that employs microprocessor technology and hydraulic control to eliminate conventional springs, shock absorbers, and stabilizer bars. Conventional metal springs require specific tuning for the desired ride and handling characteristics for a given car. The soft springs and shocks usually needed for a comfortable ride typically deteriorate the performance handling of a vehicle. These systems offer an inherent compromise which the engineer makes to best support the vehicle character. Stabilizer bars, to decrease vehicle roll without significant harshness, have been in common usage as a way to lessen the trade off. But this solution is still a compromise. With active suspension, wheel and suspension response can be optimized for most driving conditions. This allows the driver to select specific ride and handling characteristics, from a smooth "boulevard ride" to ultimate handling. Exceedingly fast hydraulics and control by computer, change suspension compliance immediately to absorb bumps or stiffen the vehicle for hard cornering.

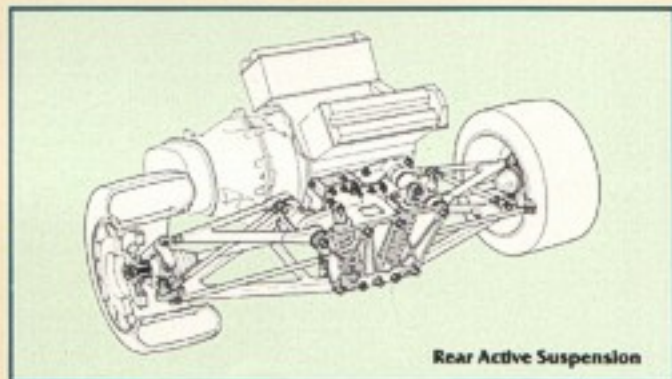
### 4-Wheel Steering

The Corvette Indy has been designed to incorporate 4-wheel steering. As the Indy development program progresses, a rear wheel steering system may be added if such an arrangement is deemed necessary. As is planned, the rear wheel steering system would augment conventional front-wheel steering. A total of 10° of arc is covered by the rear-wheel steering system planned for the Corvette Indy. At low speeds the rear

steering can be used to enhance vehicle maneuverability. Reduction in the front wheel steering arc, usually between 30° and 35°, limits front wheelhouse intrusion in the passenger compartment without compromising the vehicle's turning circle. But rear wheel steer improvements in high-speed handling through small rear steer adjustments are also part of the Corvette Indy 4-wheel steering concept.

### Technological Progression

Two other technologies under development for the Corvette Indy are drive-by-wire and computer traction control. Drive-by-wire refers to a control system similar to that used on modern aircraft, where control link-



Rear Active Suspension

ages and hydraulics have been replaced with electronic actuation. Drive-by-wire is essentially electronic control of the throttle. In this computer-controlled system, an electronic sensor reads the accelerator pedal position. Then a central processing unit, or CPU, interprets this information and activates an electric motor to precisely open the throttle. As the vehicle program progresses, a drive-by-wire system may be retrofitted to the Indy.

One advantage to the drive-by-wire system is that it can be mated to a traction control computer that uses rotational wheel-speed sensors to read if a wheel is turning faster than the others. This condition usually occurs during an abrupt application of power to the drive wheels or a low coefficient road surface. If this condition is detected, the traction control system sends a signal to the CPU instructing the system to limit the throttle for maximum useable torque delivery. Computer traction control can also be configured to apply the brakes of a spinning wheel to bring



wheel slippage to zero. When operating this way, the CPU applies braking forces to whatever wheel is spinning. In order to keep the car from stopping altogether, this computer braking is an extremely short event. On an average, the braking required to slow a spinning wheel is substantially less than 0.6 seconds! The actual need for traction control on a high-powered 4-wheel drive car is unclear at the moment. Fitting such a system to the Corvette Indy affords Chevrolet engineers a suitable platform to objectively judge the merits of this technology.

### Interior Environment

Corvette Indy explores the use of advanced electronics and related systems for both driver and passenger. Two CRT (cathode ray tube) displays are fitted in the vehicle. A CRT atop the center of the instrument panel cowl and dedicated rear camera are used for rear vision. The other two displays are located in the door panels. Vehicle dynamics and engine operating information can be called up on the driver's message screen. CRT displays for engine water temperature, engine oil temperature, engine oil pressure, fuel level, battery condition, engine vacuum, accumulative engine operating time, trip computer and active suspension pressure appear here. An ETAK navigational system is located in the right-side door. ETAK is a digitized map display that can be programmed to display the vehicle's present position as well as a desired destination. The map information is stored digitally on a high-grade audio cassette tape and is played through a dedicated ETAK tape reader, separate from the audio system. Each door houses individual climate control and sound system controls.

### Research for Production

The Corvette Indy is a work-in-progress program. At this stage, the Indy represents the integration of many advanced vehicle systems, some of which will soon appear in production Chevrolets. Significant contributions to future Chevrolet products are expected not only from the study of advancements of systems, but more importantly, from a total vehicle architecture that fully exploits the advanced concepts on the Corvette Indy.



### Future File

"Is the Corvette Indy the next production Corvette?" That's an often heard question from the public and the press whenever the Indy makes an appearance. And if you think we'd give you the answer here, you've got another guess coming.



## Vehicle Specifications

Vehicle type: mid-engine, four-wheel drive, 2-passenger coupe

Standard accessories: power steering, automatic transmission, keyless locking and entry system, head up display, ETAK navigation system, multiplex anti-theft alarm system

Sound system: Delco dual head AM/FM stereo radio with cassette and equalizer

### ENGINE

Type . . . . . V-8, aluminum block and heads  
 Bore x stroke . . . . . 3.90 x 3.66 in,  
 99.0 x 93.0mm  
 Displacement . . . . . 350 cu in, 5727cc  
 Compression ratio . . . . . 9.9:1  
 Engine control system . . . . . Delco  
 Electronics electronic with  
 port fuel injection  
 Emission controls . . . . . 3-way catalytic  
 converter,  
 feedback fuel-air-ratio control  
 Valve gear . . . . . Chain-driven double  
 overhead cams, 4-valves per cylinder  
 Power (SAE net) . . . . . 380 bhp @ 6000 rpm  
 Torque (SAE net) . . . . . 370 lb-ft @  
 3800 rpm

### DRIVETRAIN

Transmission . . . . . 3-speed automatic  
 Final drive ratio . . . . . 3.07:1

Gear	Ratio
I	2.48:1
II	1.48:1
III	1.00:1

### DIMENSIONS AND CAPACITIES

Wheelbase . . . . . 98.2 in  
 Track, F/R . . . . . 63.86 in/66.1 in  
 Length . . . . . 189.0 in  
 Height . . . . . 42.9 in  
 Curb weight . . . . . 3300 lb  
 Weight distribution, F/R . . . . . 41/59%  
 Fuel capacity . . . . . 23.3 gal

### CHASSIS/BODY

Type . . . . . plastic/carbon fiber/Nomex panels  
 bonded to carbon fiber tub  
 Body panels . . . . . carbon fiber/Nomex  
 fiberglass sandwich, reinforced plastic

### INTERIOR

Front seats . . . . . bucket  
 Seat adjustments . . . . . driver's fore and aft,  
 passenger's fixed  
 Restraints . . . . . 4-point



### SUSPENSION

F: . . . . . Ind. unequal-length control arms,  
 transverse-mounted indirect  
 active suspension  
 R: . . . . . Ind. unequal-length control arms,  
 transverse-mounted indirect  
 active suspension

### STEERING

Type . . . . . rack-and-pinion  
 Turns lock-to-lock . . . . . 1.9

### BRAKES

F: . . . . . 11.5 x 1.0-in vented disc  
 R: . . . . . 11.5 x 1.0-in vented disc  
 Power assist . . . . . hydraulic

### WHEELS AND TIRES

Wheel size . . . . . F: 9.5 x 17 in;  
 R: 11.0 x 17 in  
 Wheel type . . . . . aluminum alloy  
 Tires . . . . . Goodyear Eagle ZR50,  
 F: 275/40ZR-17; R: 315/35ZR-17

### MANUFACTURER'S

#### PERFORMANCE RATINGS

Zero to 60 mph . . . . . less than 5.0 sec  
 Zero to 100 mph . . . . . less than 10.9 sec  
 Top speed . . . . . 180+ mph

