

CAR and DRIVER ROAD TEST

Chevrolet Corvette Coupe

Its excellent engineering tends to be obscured by some rather garish styling gimmicks

Another Corvette road test? One more plunge into the verbal thicket in an attempt to describe the exact sensation in the region of the fourth pelvic vertebrae when the throttle is punched on a 427-cu. in., 435-horsepower Stingray? More open combat with similes and metaphors for the sake of establishing the fact that the Corvette is a very rapid and exciting automobile—already an article of faith among the entire population, including pre-pubescent schoolgirls? Let's dispense with all that.

If we are going to discuss the Corvette at all, let's accept a dozen premises in its behalf and hopefully avoid traveling the same old paragraphs to the same old conclusions: (1) The Corvette is surely the most popular high-performance sports car ever built, with something in the neighborhood of 250,000 examples having been sold since it was introduced in September, 1963.

(2) It is available with a variety of powertrain options, from the popular 350 cu. in., 300-hp "small engine" versions (which account for over 60% of sales) to the blockbuster 427 cu. in. units with outputs ranging from 390 to 435 horsepower, depending on which of the five optional setups is chosen.

(3) The small-engine Corvettes are marginally fast and extraordinarily civilized.

(4) The large-engine Corvettes are extraordinarily fast and marginally civilized.

(5) Corvette bodies are fiberglass, and rather heavy, somewhat noisy and tend to be expensive to repair. Corvette paintwork has a poor reputation for checking on the convex fiberglass surfaces, and the material will fracture and tear under impact. It is, however, difficult to dent and impervious to salt and other corrosive agents.

(6) Corvettes have never been totally accepted by the sports car purists, despite the fact that they will outperform—in a total sense—most of the sacred cows produced in Europe. In fact, if the Corvette was built by the dozens in a small factory in northern Italy, the same fetishists would acclaim it as one of the great automobiles of all time. However, it is dogma within this small but vocal clique that Detroit is incapable of producing automobiles that corner, brake and steer properly and the Corvette is doomed by its origins.

(7) The Corvette has an extremely loyal body of owners—probably the largest and most enthusiastic group of its type in the world. They are breathless supporters of their chosen car. Over 7000 members belong to Corvette clubs and, shades of 1952, they wave at each other when meeting on the highway! The monthly *Corvette News*, published by Chevrolet, has a circulation of 102,000, more than a number of general interest automotive magazines.

(8) Corvettes are at the peak of the performance car pecking order. Among the vast underground of street racers that total millions across this land, the man in the 'Vette is king—especially the man with the number "427" displayed on his machine's hood. In fact, more "427" badges are sold than engines—as was the case with the legendary fuel-injection Corvette engines that were discontinued in 1965. In those days, the arcane little emblem that denoted a "fuelie" was the most popular bit in the Corvette parts bin. Within the subculture of drag racers and teenie throttle-stompers, the Corvette means instant status. In fact, sales surveys indicate that a growing majority of Corvette buyers are under-25, blue-collar types making less than \$10,000

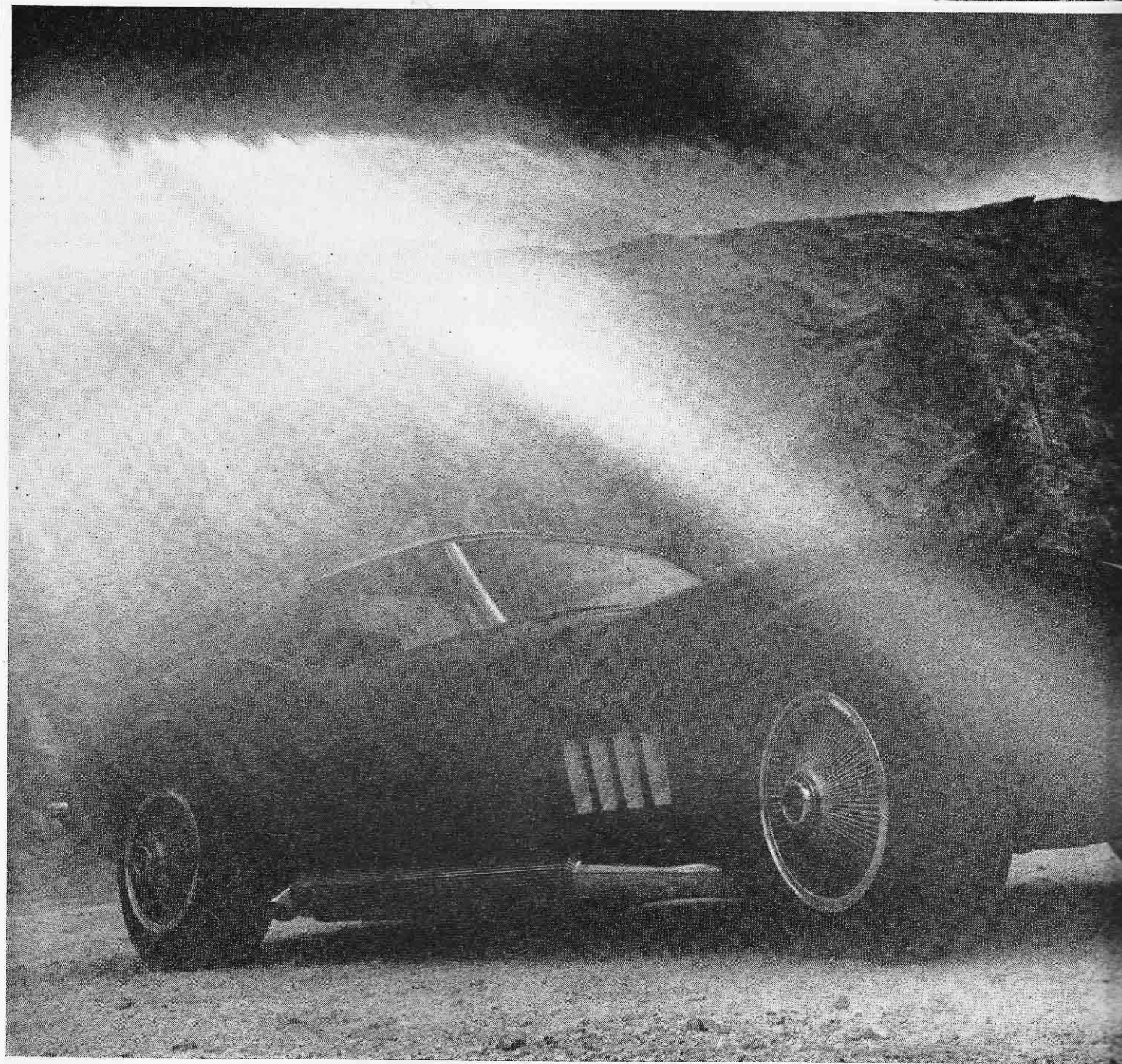
per year. Curiously, the next largest segment of buyers is over-50, white-collar men who earn over \$15,000 per year.

(9) It being a mass-class sports car, the Corvette's excellent engineering tends to be obscured by some rather garish styling gimmicks that make the uninitiated wonder if the car is a fake—a lurid, bulging, silicone-filled, automotive Playboy Bunny. This confusing identity is the result of a confrontation on the part of Chevy engineer Zora Arkus-Duntov, who is well and truly the patron saint of all Corvettes, and the Chevrolet styling department. Duntov's primary aim in his professional life is to make the Corvette the finest sports car in the world. The styling department views his car as a unique opportunity to fool around with the swoopy shapes and flashing lights that somehow to them mean "sport." It is within this minor tempest that the Corvette encounters trouble: Duntov on the one hand viewing his automobile as a purposeful, well-balanced sports car, while his rivals see it as a Flash Gordon Thunderbird for the Hugh Hefner school of mass-cult glamor.

(10) Because of this identity dispute, habitability of the car has traditionally



On one hand there is Zora Arkus-Duntov, whose primary aim in his professional life is to make the Corvette the finest sports car in the world. On the other, there is the Chevrolet styling department that views the car as a unique opportunity to fool around with swoopy shapes and flashing lights. The result of this confrontation is a lack of positive identity for the Corvette



suffered. Only recently has the driving position and control placement become acceptable (forward visibility on the styling department's first version of the present Stingray was so bad that Duntov and his engineers had to delay its introduction for a full year), and the jazzy coke-bottle shape means limited passenger room and a deplorable absence of luggage space.

(11) Despite its hefty cost—approximately \$5000 to \$8000, depending on options—the Corvette is not a hallmark of quality. Components tend to come loose and detailed coachwork is generally below average for a car of this price (although no worse, it might be noted, than on some European exotica).

(12) Originally intended only as an image-builder and "loss leader," the Corvette has been a pleasant sales success for Chevrolet and produces a substantial annual profit. In 1969, sales should reach 30,000.

The particular subject of this test was something more than the average Corvette. It was one of the aforementioned 435-hp monsters (the L-71, with three 2-barrels, cast iron heads and the optional transistor ignition), with a sprinkling of options, that ran the gamut between form and function. As an example of the identity problem that exists within the Corvette marketing structure, our test car was equipped with power windows and "off the road" (read "racing") external exhaust pipes. Within this framework of logic, Cadillac should be planning the Eldorado as a Grand National stocker.

Despite any efforts to soften its latent toughness with such niceties as power windows and an AM/FM radio, our Corvette came across as one thundering, hammering brute of an automobile. In bright red, the car had its share of scratches and rips in the fiberglass, giving it the appearance of a race-worn Ferrari (there is a Corvette cruising the streets of New York with Ferrari name plates affixed, as a matter of fact). Its giant exhaust pipes, its fat, black-wall tires and its disheveled surface gave it a fierce countenance indeed, but the incredible power of the beast didn't become apparent until its giant engine began to thump away and its wheels began to turn. Then it became a truly visceral experience to motor along in the Corvette—at any speed. Tires whining, the awesome rumble of the exhaust sweeping through the cockpit, the emission pump pulley screeching, the fiberglass body creaking; sounds of a genuinely exciting vehicle. Enough sounds, incidentally, to render the radio useless and to severely limit conversation with the windows down, but worthy entertainment unto themselves. And after all, if the sensation of driving a potent machine like the Corvette isn't fun by itself, one is a fool to own it in the first place.

"It's a great *machine*," said one of the brightest young marketing and advertising types within the Chevrolet organization in an effort to describe the Corvette. "But it's not a terribly useful *device*. The present Corvette is more like a dune buggy than a

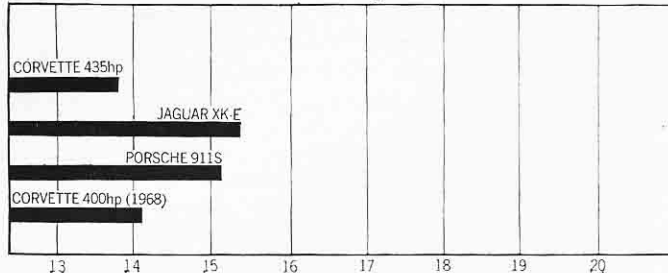
conventional GT or sports car in that it can't do much that a functional automobile is expected to do." He is in many ways correct. The Corvette, with its giant engine and muscular drivetrain, packed into its space-age body, leaves precious little room for the human element. It is questionable, for example, that a couple could load aboard enough luggage for a civilized one-week journey without serious inconvenience. At the same time, the *machine* has such an excess of power that prolonged driving on ice and snow would become a frustrating and worrisome task.

But on dry pavement, with no place to go except a carefree spin down some interesting roads, the Corvette is an ever-loving kick. The controls are nearly perfect, the throttle, clutch and brake pedals flawlessly placed, with smooth linkages that belie the potency of the car. The close-ratio manual transmission is a joy to operate, and the suspension—firm at low speeds, but perfect from 70 mph upward—is ideally suited for the automobile. In fact, one of the most extraordinary things about the Corvette is its overall smoothness. Most cars having an excess of 400 hp are jerky, neck-snapping, uncivilized and bull-like, but the Corvette's controls are so well designed that utter novices can jump aboard and drive like veterans—up to a point. It has been a long-standing Chevrolet policy to give their high-performance engines great smoothness, with none of the tricky carburetor gimmicks that bring on a great thrust of power whenever the throttle is opened. The throats of the three 2-barrel carbs are controlled by air flow rather than mechanical linkage, giving the engine a turbinelike smoothness. If power did come in with a bang, as on some other high-performance machines, the Corvette would be a fearsome racer, safe only in the hands of responsible professionals. As it is, only imprudent applications of power on wet or loose surfaces can be dangerous, for which most of those eager young customers should be thankful.

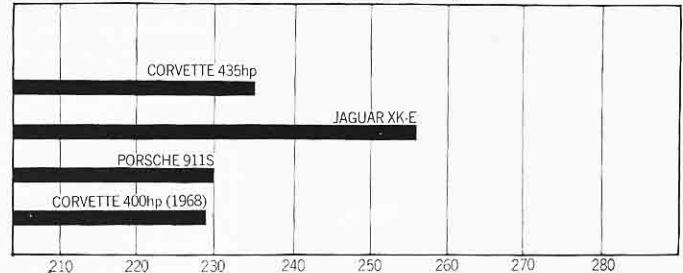
This overall élan of the Corvette makes its performance deceiving. In spite of all the sensory inputs, it never seems as if you're going *that* fast. Power comes so effortlessly that neither car nor driver is ever called upon to strain in the slightest. Almost anyone, for example, could run the car through the quarter-mile in excess of 100 mph. An interesting test of truly powerful cars is the 0-100-0 run, wherein the time to accelerate to 100 mph and brake to a full stop is recorded. The best clocking we know of for a street automobile is Ken Miles' 14 seconds in a 427 Cobra. A number of years ago Aston Martin advertised that its big Sixes would do the job in 25 seconds. We tried it once with the Corvette. On a bumpy pavement, with a less-than-perfect start, we made the trip in approximately 23 seconds. More practice and it is probable that the time could have been

(Test continued on page 44; Specifications overleaf)

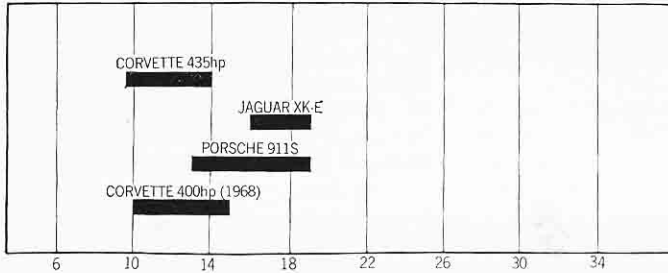
ACCELERATION standing 1/4 mile, seconds



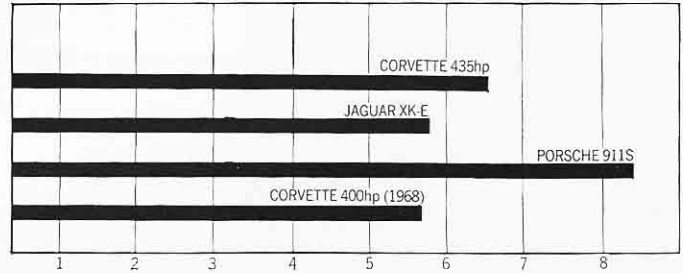
BRAKING 80-0 mph panic stop, feet



FUEL ECONOMY RANGE mpg



PRICE AS TESTED dollars x 1000



CORVETTE 427 COUPE

Manufacturer: Chevrolet Motor Division
General Motors Corp.
30003 Van Dyke
Warren, Mich. 48090

Vehicle type: Front-engine, rear-wheel-drive, 2-passenger coupe

Price as tested: \$6573.30

(Manufacturer's suggested retail price, including all options listed below. Federal excise tax, dealer preparation and delivery charges, does not include state and local taxes, license or freight charges)

Options on test car: Base car, \$4895.00; soft-ray tinted glass, \$16.90; power windows, \$63.20; rear window defroster, \$32.65; posi-traction axle 370 ratio, \$46.35; power brakes, \$42.15; engine block heater, \$10.55; full-transistor ignition syst., \$81.10; 435-HP turbo-jet 427 V8 engine, \$437.10; 4-speed close-ratio trans., \$184.80; side-mounted exhaust system, \$147.45; tilt-telescopic steering wheel, \$84.30; power steering, \$105.35; F70 x 15 red-stripe tires, \$31.30; special wheel covers, \$57.95; front fender louver trim, \$21.10; audio alarm system, \$26.35; speed warning indicator \$11.60; AM/FM stereo radio, \$278.10

ENGINE

Type: V-8 water-cooled, cast iron block and heads, 5 main bearings
Bore x stroke 4.25 x 3.76 in, 108.0 x 95.5 mm
Displacement: 427 cu in, 7000 cc

Compression ratio: 11.0 to one
Carburetion: 3 x 2-bbl. Holley
Valve gear: Pushrod operated overhead valves, mechanical lifters
Power (SAE): 435 bhp @ 5800 rpm
Torque (SAE): 460 lb-ft @ 4000 rpm
Specific power output: 1.02 bhp/cu in, 62.2 bhp/liter

DRIVE TRAIN

Transmission: 4-speed, all-synchro
Final drive ratio: 3.70 to one
Gear Ratio Mph/1000 rpm Max. test speed
I 2.20 9.5 62 mph (6500 rpm)
II 1.64 12.8 83 mph (6500 rpm)
III 1.27 16.5 107 mph (6500 rpm)
IV 1.00 21.2 138 mph (6500 rpm)

SUSPENSION

F: Ind., unequal length wishbones, coil springs, anti-sway bar
R: Ind., single trailing arms, fixed length half-shafts and lateral links, multi-leaf transverse spring, anti-sway bar.

DIMENSIONS AND CAPACITIES

Wheelbase: 98.0 in
Track, F/R: 58.7/59.4 in
Length: 182.5 in
Width: 69.0 in
Height: 47.8 in
Ground clearance: 6.0 in
Curb weight: 3450 lbs
Weight distribution, F/R: 51.5/48.5%
Battery capacity: 12 volts, 62 amp/hr
Alternator capacity: 504 watts

Fuel capacity: 20.0 gal
Oil capacity: 5.0 qts
Water capacity: 22.0 qts

STEERING

Type: Recirculating ball gear with linkage booster
Turns lock-to-lock: 3.2
Turning circle curb-to-curb: 35 ft

BRAKES

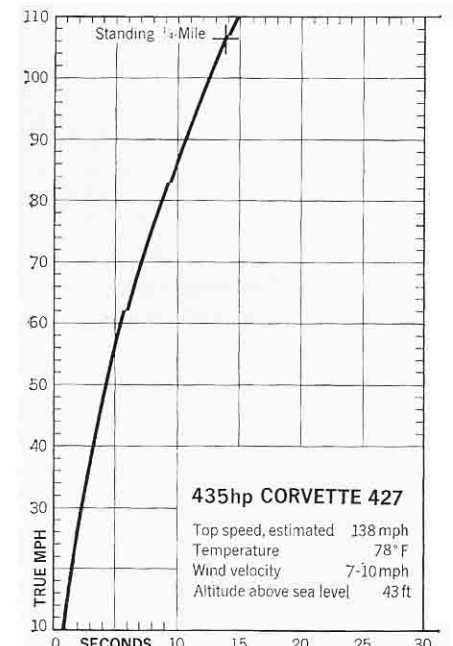
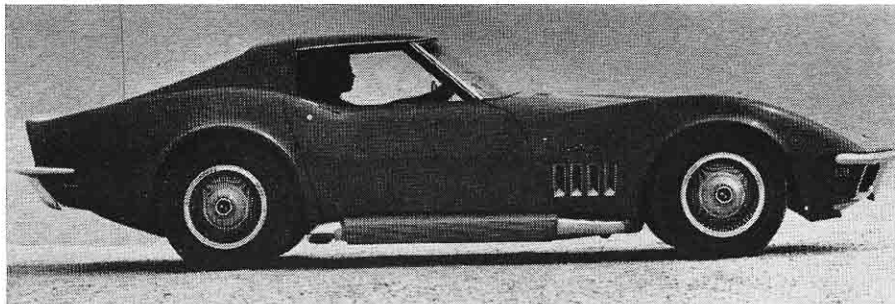
F: 11.75-in vented disc, power assist
R: 11.75-in vented disc, power assist

WHEELS AND TIRES

Wheel size: 15 x 8.0-in
Wheel type: Stamped steel, 5-bolt
Tire make and size: Goodyear F70-15
Tire type: Tubeless
Test inflation pressures, F/R: 24/24 psi
Tire load rating: 1280 lbs per tire @ 24 psi

PERFORMANCE

	Seconds
Zero to	
30 mph	2.2
40 mph	3.2
50 mph	4.2
60 mph	5.3
70 mph	7.0
80 mph	8.6
90 mph	10.7
100 mph	12.6
Standing 1/4-mile	13.8 sec @ 106.8 mph
Top speed (estimated)	138 mph
80-0 mph	235 ft (0.91 G)
Fuel mileage	9.5-14 mpg on premium fuel
Cruising range	190-280 mi



CHEVROLET CORVETTE COUPE

(Continued from page 41)

brought down near 21 seconds. With better tires another two seconds might have been shaved off. And therein lies the flabbiness in the Corvette's muscle . . . tires. The F70-type employed on the car are simply inadequate under heavy throttle and braking. They smoke, they screech, they lose adhesion, they are squirrely in the rain. Duntov himself was hospitalized during the preparation of this test and we had no chance to discuss the problem with him, but he has said on past occasions that he is aware of the problem, but can find no other tires that work better. The owner's manual firmly warns that the car's suspension has been designed for these specific tires and no replacements should be tried. Nonetheless, it would be interesting to experiment.

Despite its tire weaknesses, the Corvette is a superior automobile in all departments of handling. Like the man said, the *machine* is excellent, but the car's functional applications are limited. In addition to the aforementioned storage deficiencies, it is full of minor irritants—many of them the responsibility of the stylists, not the engineers. To begin with, limited interior space makes things very hot indeed, the glories of "Astro-Ventilation" notwithstanding. With that great lump of hot iron mounted a few inches on the other side of the firewall, BTUs pour over the driver and passenger in unpleasant quantities, even at cruising speeds.

The windshield wipers are concealed beneath a moveable flap that looks as if it came from the wing of a Boeing 727. Before the wipers can become operable, this covering has to wind itself clear, a movement that takes several seconds. There are moments, especially in a car with the cruising potential of the Corvette, when several seconds with an opaque windshield would mean certain disaster, and peek-a-boo wipers become a grim bit of frivolity. The dash, while containing a lovely, large tachometer and speedometer, is cluttered with little lights that tell the driver what external illumination he has operating at any given time—in essence, gimmicks. And instead of a clock within the 5-dial instrument bank on the console, why not an oil-temperature gauge? The higher-performance 427s are known to be thirsty for oil (we used two quarts in 1500 miles) and the more that informs the driver about his expensive engine the better.

Fifteen years worth of Corvettes have been produced since 1953, using five body styles. The past two (1963-67 and the present design) have been esthetically delightful. A bit flamboyant, perhaps, but nonetheless pretty shapes that have few deficiencies in a purely artistic sense. But it is time for a change and the Chevrolet management knows it. Up to now, development has been evolutionary, with constant refinement of the basic front-

engine, two-place roadster design. In 1956 came the first V-8, with its shocking acceleration, while 1963 brought the first Corvette coupe and along with it the masterfully articulated independent rear suspension. But at the same time the Corvettes have gotten heavier, and more complicated, departing in a sense from the original sparse, functional roadsters that first caused so much excitement.

It is known that Zora Arkus-Duntov is a great exponent of small-displacement, high-revving engines, and it would seem logical that he would be pushing for the manufacture of smaller, lighter Corvettes powered by the zappy, exciting, 302 cu. in. Z/28 engine. But here Duntov faces a difficult personal choice. Because he rightfully believes that his Corvette should represent the pinnacle of Chevrolet engineering, he cannot bring himself to accept producing his car with anything less than the biggest, most powerful engine in the Chevrolet line-up. He feels, with some justification, that it would be absurd to market a 305 or 350 cu. in. Corvette as the top performance car in the division when a customer could buy a Chevelle or Chevy II with a much larger and more powerful engine. Therefore he consents to his once-nimble machine being made bulkier and bulkier by the year.

The present Corvette will doubtlessly be the last front-engine model. It remains uncertain if the new rear-engine version will be introduced in 1971 or 1972 (a great deal depends on Ford and its rumored rear-engine sports car). Until then, the present Corvette will be marketed in essentially the same form as seen on these pages.

Although a number of prototypes have been tested, a certain amount of turmoil exists within Chevrolet as to exactly what form the new car will take. The present General Manager, John DeLorean, is as much an automotive purist as ever reached the top ranks of General Motors, and it is known that he is unhappy with the present Corvette. Rumors from deep inside the company indicate that DeLorean has pronounced that the mid-engine version must be a functional sports/GT car, weighing in the neighborhood of 2600 lbs. and containing an engine of about 400 cu. in. This places a giant challenge before Duntov and his engineers. It means cutting the weight of the present car by 1000 lbs. while keeping essentially the same size engine. Proper amounts of luggage space, etc. must also be included. If this can be accomplished with a fiberglass or steel body remains to be seen, but it can be assumed that DeLorean, who is an engineer himself, will drive hard to make the new Corvette lean and tough.

If he succeeds, it could mean goodbye to the jet-plane gimmickry. And for that, we'd all be thankful. ●

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