

CAR and DRIVER

APRIL 1967 • 60 CENTS

ROAD TESTS:

New Volvo 144S • Barracuda 383 • Sunbeam Arrow

We Go to Shelby's Race Driving School

CHEVY'S MYSTERY CAR:

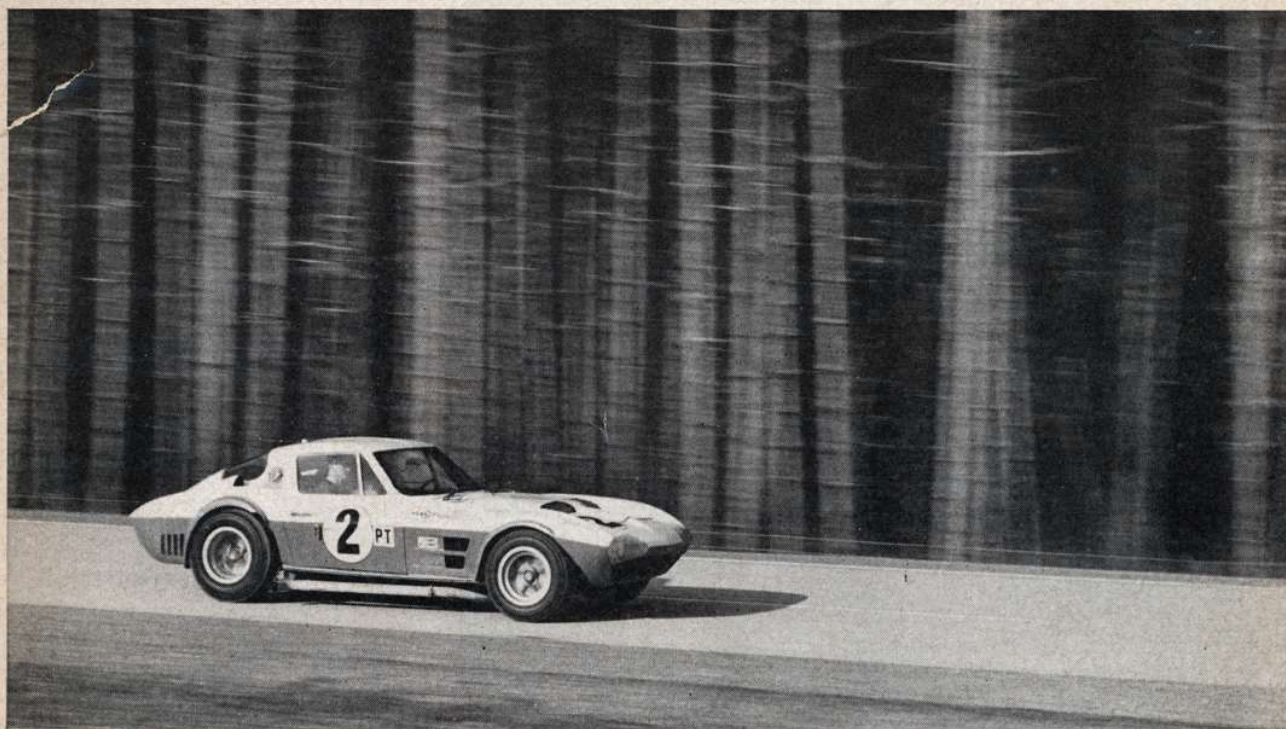
Corvette Grand Sport

MEYERS MANX:

**YOU CAN BUILD
THIS FUN CAR
FOR \$635!**

(PLUS A LOT OF
VW PARTS AND
TENDER LOVING CARE)





Once upon a time—not so very long ago—General Motors built a real racer. See page 48.

Car and Driver Magazine • Contents

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CAR=DRIVER

**AUTO
SHOW
ISSUE**

This month's cover: The all-purpose wonder car of the century, the Meyers Manx, was caught wading around some California beach by photographer Rick McBride. The Manx is anything you want it to be. For some examples, see page 24.

Next month's cover: Our giant, bonus Auto Show issue for May features the Readers' Choice winners, the Daytona Continental and Riverside 500 races, '67 automobile prices, the In and Out Guide, and a slew of road tests. Get it. On sale April 20.

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David Erwin of Painted Post, New York, describes himself as a "Chevy man." There are "Ford men" and "Plymouth men" and "Pontiac men," but Erwin and the close-knit group of friends who gather nightly to labor over one of the rarest of all Chevrolets remain loyal to that marque.

David Erwin could also be cast as a "Ferrari man." A tall, reserved banker, and the heir of a prominent family of landed gentry whose holdings date back to the Revolution, Erwin is the sort of precise, well-bred young man whose fascination with the Maranello product is practically a foregone conclusion. In fact, one stall in Erwin's comfortable workshop behind the family's large, colonnaded homestead is occupied by one of the last GTO lightweights ever built.

But the machine stabled beside the Ferrari is the one that keeps "Chevy man" Erwin and his friends turned on. This is one of the fabled "Grand Sport" race cars, a four-wheeled passenger pidgeon whose existence bears testimony to those mystery-shrouded days when Chevrolet was committed to winning every major sports car race in the world, including Le Mans.

Ever since the spring of 1963, when General Motors summarily cancelled all competition activities, the Corvette Grand Sport has established itself as one of the most fascinating enigmas in motor racing annals. Periodically, one of the five examples Chevy built has appeared at places like Sebring or Nassau, has raced around at shocking speeds, and then has plunged back into mysterious seclusion. People are still talking about how the Jim Hall/Roger Penske Grand Sport stunned the Fords and Ferraris by leading the early laps of the 1964 Sebring 12-Hour, and how Penske thrashed the late Ken Miles and his Cobra 427 prototype at Nassau later the same year.

These rare outings, though impressive, never did the machines full justice, because GM's anti-racing policy was so effective than never once did a Grand Sport reach the race track at the level of readiness that Chevrolet engineers had intended. That the cars were so impressive when they were finally raced—both outdated and underpowered—can only make one pause to wonder how overwhelming they might have been if Chevrolet had been permitted to carry out the full Grand Sport program with corporate blessing.

The Grand Sport was a direct development of the 1958 FIA ruling that limited international sports/racing cars to three liters engine displacement. Up until that moment, Chevrolet had been hard at work on some exotic big-engined sports/racers, the last of which, the Corvette SS, ran at the 1957 Sebring race in the hands of Piero Taruffi and John Fitch. Seeing no benefit to passenger-car engineering in perfecting a 3-liter racing engine, Chevrolet stayed away from road racing until their resident competition wizard, Zora Arkus-Duntov, spotted a loophole in the FIA rules that would permit Chevrolet's return. Because no displacement limits were set on GT cars, Duntov and his talented design group set out to build a lightweight, big-engined Grand Tourer that would be powerful enough to win not only the GT class, but also the supposedly faster sports/racing category as well. The goal was no less than an overall victory at the Le Mans 24-hour classic.

Chevrolet, still shying away from an all-out racing

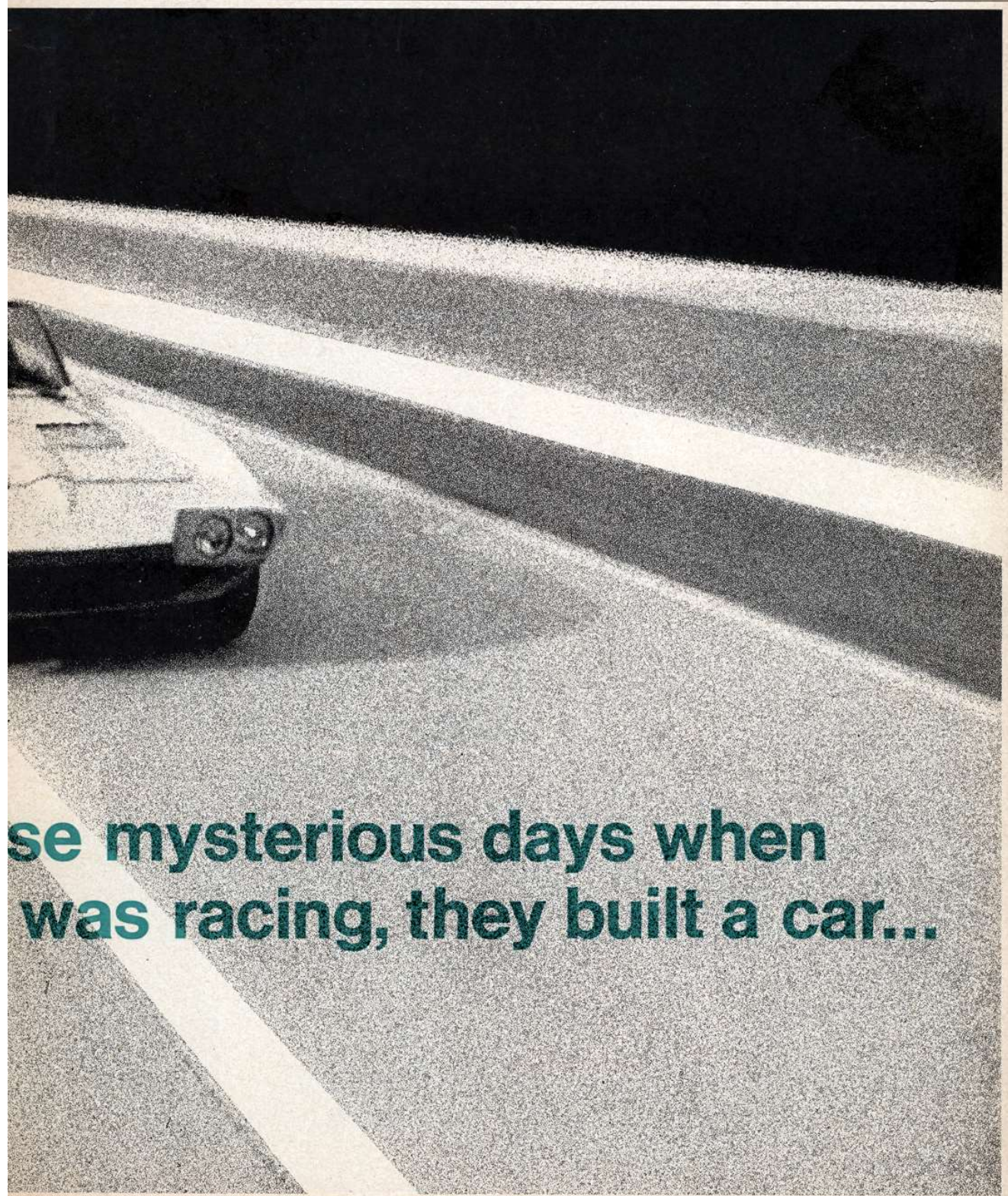
GRAND SPORT!

BY BROCK YATES



Long ago in the General Motors

PHOTOGRAPHY: ALFRED FISHER



**se mysterious days when
was racing, they built a car...**

CORVETTE GRAND SPORT

(continued from preceding page)

car disguised as a GT car, wanted their Grand Sport to look like a production car—in this case, their brand new Sting Ray. Duntov and his Corvette engineers reckoned that it would take 600 horsepower to push the Sting Ray up the straight at Le Mans at a competitive top speed, 4-wheel disc brakes to slow it down, and a vehicle weight of 1800 lbs. to achieve competitive lap times.

Because the rules allowed a GT engine to displace less than its stated capacity, but not more, Chevrolet specified a 327 cu. in. aluminum block with the standard 4-inch bore and a 3/4-inch stroker crank (4" x 4",

in hot rod parlance), for an enormous 402 cu. in. displacement. The heads, also aluminum, have never been seen by the public. The combustion chambers were hemispherical and featured twin ignition. Sitting astride the engine was a complex fuel injection system, with eight long ram tubes poking up through the hood.

Initial tests proved the 4" x 4" setup unsatisfactory and subsequent engines were given 3.75-in. strokes, which reduced displacement to 377 cu. in.

The chassis was tubular aluminum with the fully independent Sting Ray rear suspension. The body was slightly smaller than stock Sting Ray to improve the

CORVETTE GRAND SPORT SPECIFICATIONS*

Manufacturer: Chevrolet Motor Division
General Motors Corporation
Detroit, Michigan

Vehicle type: Front-engine, rear wheel drive, 2-passenger GT racing car, ladder frame, aluminum structural members integrated with reinforced plastic body, plexiglass side and rear windows

ENGINE:

Type: Water-cooled V-8, aluminum block and heads, 5 main bearings, twin ignition, hemispherical combustion chambers, two valves per cylinder

Bore x stroke..... 4.00 x 3.75 inches, 101.7 x 95.3 mm

Displacement..... 377 cu inches, 6172 cc

Compression ratio..... 11.0 to one (alternative ratios: 10.0, 12.0 to one)

Carburetion..... Port-type fuel injection

Va ve gear..... Push-rod operated overhead valves, mechanical lifters

Valve timing:

Intake opens..... 55° BTDC

Intake closes..... 117° ABDC

Exhaust opens..... 106° BBDC

Exhaust closes..... 44° ATDC

Valve lift..... 0.46 inches (intake and exhaust)

Valve diameter:

Intake 2.20 inches

Exhaust 1.72 inches

Power (SAE)..... 550 bhp @ 6400 rpm**

Torque (SAE)..... 500 lbs/ft @ 5200 rpm**

Specific power output..... 1.46 bhp/cu in, 89.3 bhp/liter

Maximum recommended engine speed..... 6500 rpm**

DRIVE TRAIN

Transmission..... 4-speed manual, all synchromesh

Clutch diameter..... 10.0 inches

Final drive ratio..... 3.55 (alternative ratios: 3.08, 3.36, 3.70, 4.11, 4.56)

Gear	Ratio	mph/1000 rpm	Max. speed (3.55 ratio axle)
I	2.21	10.6	69 mph @ 6500 rpm
II	1.64	14.2	92 mph @ 6500 rpm
III	1.27	18.4	119 mph @ 6500 rpm
IV	1.00	23.3	152 mph @ 6500 rpm

DIMENSIONS AND CAPACITIES

Wheelbase..... 98.0 in

Track..... F: 56.8 in, R: 57.8 in

Length..... 172.8 in

Width..... 69.6 in

Height..... 51.9 in

Ground clearance..... 4.3 in

Curb weight..... 1908 lbs

Lbs/hp..... 2.9

Battery capacity..... 12 volts, 61 amp/hr

Generator capacity..... 624 watts

Fuel capacity..... 36 gal

Oil capacity..... 9 qts

Water capacity..... 16.5 qts

SUSPENSION

F: Ind., fabricated tubular unequal-length wishbones, combined coil spring/shock absorber units, anti-sway bar

R: Ind., lower transverse leaf spring, half-shafts acting as upper locating links, trailing arms, tubular hydraulic shock absorbers

STEERING

Type..... Recirculating ball

Turns lock-to-lock..... 3.25

Turning circle..... 40 ft

BRAKES

F: 11.47-in Girling discs with 3.30 x 2.04-in pads (power assisted)

R: 11.50-in Girling discs with 3.06 x 1.55-in pads (power assisted)

Swept area..... 435.2 sq inches

WHEELS AND TIRES

Wheel size and type..... 6.0 x 15-in, magnesium knock-off type, weighing 16.5 lbs each

Tire make, size and type..... Firestone SS170 TW, F: 7.10/7.60-15 R: up to 8.00/8.20-15

*From FIA Application 837 A-63

**Our estimate

The Grand Sport's engine was to be a 600-hp, 402 cu. in., all-aluminum V-8 with twin ignition and hemi heads.



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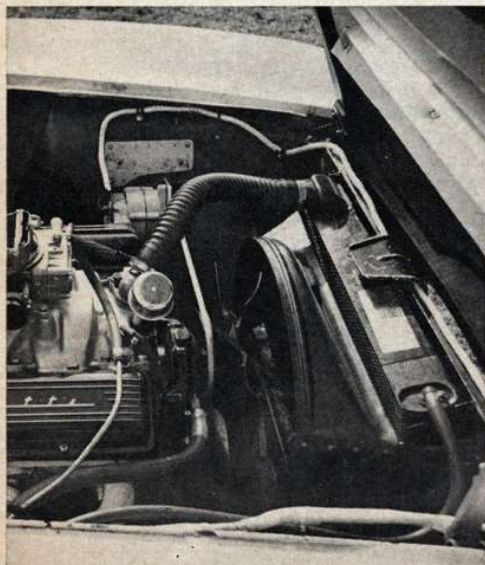
aerodynamics, although extra-wide fender valances later had to be fitted to accommodate ever-wider tires. Aside from the front headlights being placed behind streamlined plexiglass housings, the cars looked quite similar to the stock Sting Rays.

Chevrolet submitted papers for FIA recognition of the Grand Sport early in 1963, promising to have built 100 examples between July 7, 1962 and June 1, 1963 (Le Mans was on June 15-16 in 1963), but the papers were hastily withdrawn when the Corporation pulled the plug on the racing program. An unauthorized copy of the papers, hoarded for years, turned up in New

York recently, and makes interesting reading indeed (see the specifications table, opposite).

As far as we can determine, five coupes were built by Chevy before the racing ban. Chevrolet originally intended to market several hundred production Grand Sports to the public at a price under \$10,000, but that aspect of the project never got off the ground, and the "Grand Sport" label was applied only to the factory-built race cars.

Duntov and his crew went to Sebring, Florida, in mid-January '63, for pre-race practice, with Masten Gregory, Dr. Dick Thompson, and Duntov himself do-



GRAND SPORT!

(continued from preceding page)

ing the driving. The 377 cu. in. engines were not ready and fuel-injected 327s were used in their stead. It was discovered that the Girling solid discs would last only a few hundred miles, and Chevrolet switched to vented discs of their own design with Girling calipers (presaging the vented discs of the '65 Sting Ray). The test program was judged an overall success, and the Chevrolet people planned to debut the cars at Sebring in March, 1963, followed by an all-out assault on Le Mans that June.

While details for the trip to the Sarthe circuit were being worked out, Mickey Thompson built some lightweight Sting Rays of his own, powered by the top-secret "Mk. II" 427 cu. in. porcupine-head stock car engine, and entered them in the Daytona Continental. In later years, some of the Thompson lightweights were to become confused with the factory-built Grand Sports, but they were quite unrelated to the exquisite machines that Duntov's group was completing in the winter of 1963.

Immediately following the Daytona 500, General Motors lowered the boom. Three Mk. II-engined Chevy stockers driven by Junior Johnson, Johnny Rutherford and G. C. Spencer were so much faster than everything else that only incomplete "debugging" prevented them from turning the race into a private donnybrook. Success seemed a heartbeat away. When GM brass-hats Donner and Gordon suddenly announced that the Corporation would henceforth follow the 1957 Automobile Manufacturers Association anti-racing resolution to the letter, the enthusiasts at Chevrolet were probably as shocked as anybody else. The Grand Sport—and with it Sebring and Le Mans—became as dead an issue to GM as the Missouri Compromise.

The cars sat around in some dark corner of Chevrolet Engineering for 10 months. Then the lid opened a crack before slamming shut for another year. In December of '63, three of the Grand Sports showed up at Nassau. Two were entered by John Mecom, while the other was in Jim Hall's stable. The cars were not seen again until Nassau '64, when Penske scored the first of three wins that week, immediately prior to his retirement.

By now the Grand Sports were getting old. Chevy seemed to have forgotten about them. No eyebrows were raised when two of them showed up at Sebring in March '65.

No eyebrows, that is, except Dave Erwin's.

From the moment he clapped eyes on a Grand Sport, Erwin wanted one. He was spellbound at the sight and sound of the wickedly powerful machine. He followed the course of the car at Sebring and Elkhart Lake, after which it came into the hands of Pennsylvanian George Wintersteen. Wintersteen, a friend of Penske's, raced the car sporadically—at Sebring in '66, and in some club events. Last fall Wintersteen casually offered it for sale minus engine, and Erwin snapped it up.

The car was in excellent condition. The plastic headlight covers had been replaced with wire mesh; the differential oil cooler, which had originally been attached to the rear deck lid, was missing; the filler cap had been altered slightly; and the air jacks had been removed. Otherwise the car was practically the same as the day it first rolled out of the General Motors Tech Center nearly five years before.

When we were given the opportunity to drive Erwin's Grand Sport (designated Chassis #5) the car was fitted with a muscled-up 327 that Erwin, his friends, and his brother Tom, had stuffed aboard. The engine—which utilizes a Crower cam and hi-rev kit, General Motors exhaust headers and hi-rise aluminum manifold, cast iron heads from the fuel-injection Corvette engine, and a big Holley carburetor—is intended as an interim powerplant. Last May, Dave saw another ad.

This one was placed by NASCAR short-track star Bobby Allison, and was offering one complete Mk. II engine, a pair of spare blocks and enough extra Mk. II spares to build another complete engine. Erwin grabbed them, and is hoarding them as if they were H. L. Hunt's oil leases.

Because the blue and white brute wasn't registered (Erwin plans to run the car in a few regional races, then restore it, but never drive it on the street), we towed it a short distance to a long stretch of completed but not yet opened four-lane highway for some test runs. The lads had ingeniously stuffed the mufflers designed for the new Sting Ray external side-mounted exhaust pipes into the enormous Grand Sport tubes, which reduced the noise level to a point where the off-duty personnel in the State Police barracks a few miles down the road wouldn't be unduly disturbed.

It was well and truly a racer. Thumping down the highway on the

tremendous Firestone Indy tires, the familiar odors of oil and hot paint wafted into the cockpit, along with the sound of air rushing around the hand-operated plexiglass windows. This mingled with the whine of the fully-locked differential gears and the slick prototype Muncie gearbox.

The gearbox and brakes were nearly perfect. That means stops like the car had just run into a mud bank, while the transmission was as loose—and yet precise—as any we've ever handled. The locked rear end made it an awful chore to negotiate corners under 30 mph, mainly because the inside rear wheel would moan and scuff the pavement, and the rear end sounded as if it was going to explode through its cast aluminum housing, but at high speeds the car was a dream. It had virtually neutral steering characteristics, and we could find nothing in its entire handling range that could be described as treacherous or unstable.

Naturally, "Chevy man" Erwin is considering the installation of one of his Mk. II 427s. Although he admits this would not be an entirely authentic switch, he is correct when he says that the assembly of a hemi-head, twin-ignition, port-injected, all-aluminum Chevy engine is out of the question, and he hopes that this will get him off the hook with the historical purists.

In any case, David Erwin of Painted Post has himself one of the most unique automobiles in the world. The other four Grand Sports have been sold and resold several times, although either Wintersteen or Penske has owned all of them at one time or another. Wintersteen and Mecom currently own Grand Sports that have been converted into roadsters, while Texan Delmo Johnson and Toledo, Ohio, Chevy dealer Jim White own the remaining two coupes. So Erwin has one fifth of the total supply of Grand Sports, making his possession all the more valuable.

There it sits, in the loving care of Erwin and his buddies, looking ready to tangle with any GT car built in the half-decade since the car was made. It surely is one of the fastest relics in the world—a car that remains only a few seconds off the best lap times of the fastest road racing cars in the world, even today.

Given an even break, old Chassis #5 might have brought the Corporation that tossed it out like an illegitimate son America's first victory at Le Mans—and three years ahead of time at that. But that's all over now... except for "Chevy man" David Erwin.

cd

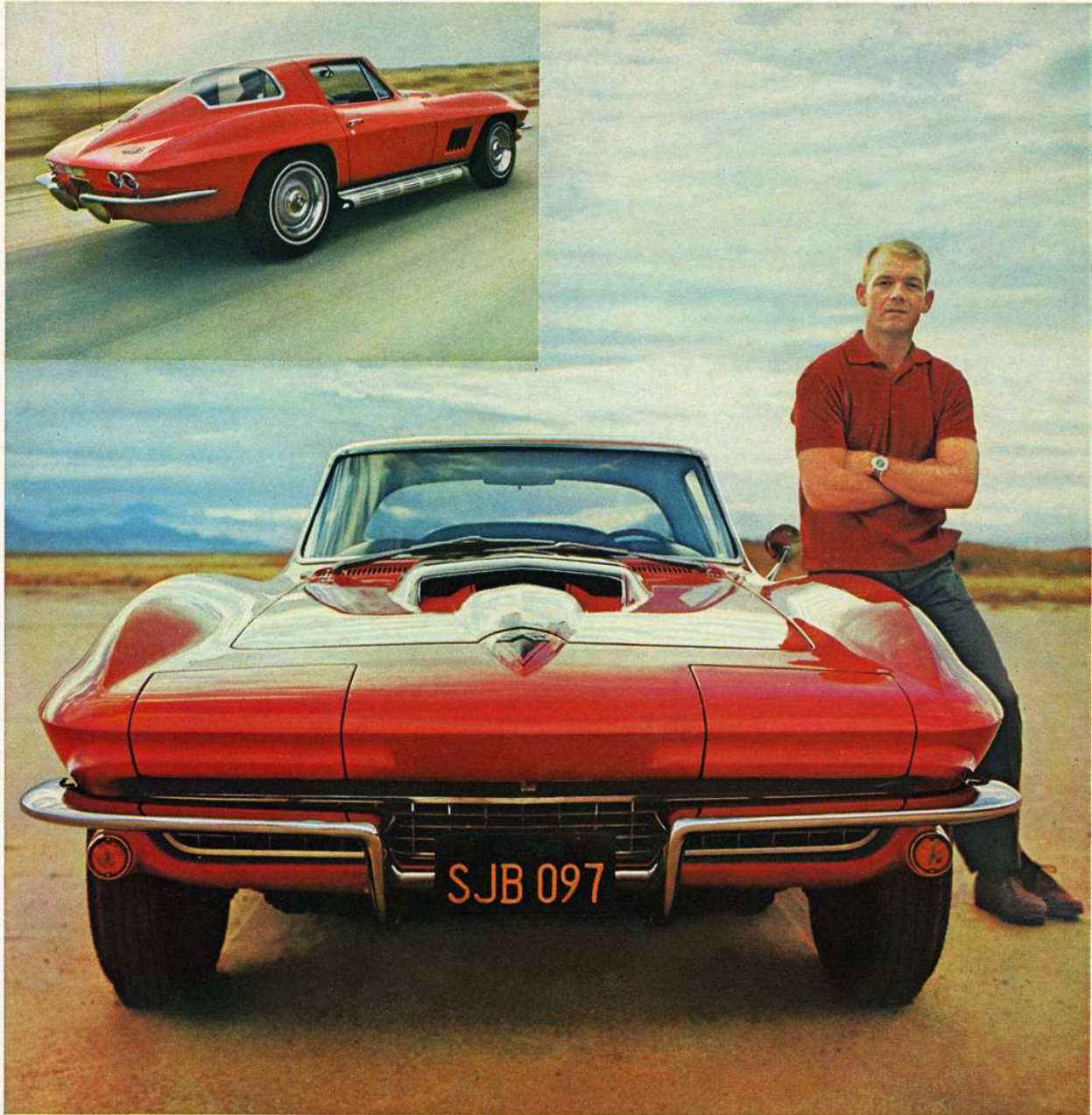
Wolf in wolf's clothing.

Some cars tell you all about themselves at first glance. A big soft family sedan. (Ho-hum) An utterly practical station wagon. (Ehhh) A

plodding sort of economy car. (Wheee) Or a Corvette. A tough, wide-tired, bulge-hooded "let's go driving" Corvette.

A Sting Ray with the 427-cubic-inch 435-horsepower three-deuces V8 you can specify. It *is* what it looks like.

'67 Corvette



Corvette Sting Ray Sport Coupe with features like four-way hazard warning flasher standard for your added safety.

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