350-HP CORVETTE

The familiar Corvette Sting Ray chassis gets an exciting—but clumsy—new body

IF THERE'S SUCH a thing as a psychedelic car, the 1968 Corvette is it. One almost expects strobe lights to come up when those monstrous flaps out front start lifting at the pull of the headlight switch. Chevrolet stylists have sensed both the fads of the day and our maddeningly oppressive traffic conditions by providing its customers with a car that can take them on a trip without even going anywhere.

Rumors came and went about an exciting, advanced new Corvette that would package the engine in the "midship" position now almost universal in racing machinery and feature new, more efficient body-chassis construction. But, alas, all the available money was spent on new styling.

So—what we have is an exciting new shape, highly reminiscent of certain older Ferraris, laid around a chassis that seemed fairly modern in 1962 but is now quite dated by the march of progress. We wish we could express more enthusiasm for the new model, but we feel that the general direction of the changes is away from Sports Car and toward Image and Gadget car. And since the Corvette is America's only sports car this direction is a disappointment to us. The new body is 7.0 in. longer, nearly all of the extra length being front overhang. It is 0.4 in. narrower overall, but the stylists have had such control over its layout that no attempt has been made to maximize interior dimensions relative to exterior ones. Luggage accommodation is less and our Comfort Index ratings are down by 5 points for the two larger-size drivers.

On the other hand, there are some positive aspects to the new body. The relation of the steering wheel to the seat is more satisfactory; it was rather high in the Sting Ray and shorter drivers would become fatigued at hanging onto it over long periods. However, the lower steering wheel makes ingress-egress more difficult and one has to draw the legs in carefully to avoid the wheel. Overall height is 2.0 in. lower, and undoubtedly the necessity of fitting the seats, steering column and so forth into the lower body but on top of the bulky chassis frame is responsible for both the improved driving position and some of the space reductions. The new Corvette is big on the outside and small on the inside.

The new instrument layout met with mixed reaction. The uniform Corvair-Camaro arrangement has been adopted; the main emphasis is on two huge dials for speedometer and tachometer directly in front of the driver. The other gauges are relegated to a spot in the center of the panel where they are nicely marked and angled toward the driver; but they do require considerable diversion of attention from the road. Esthetically it's an improvement over the simulated twin-cowl look of the Sting Ray's panel. The glove box now occupies space behind the seats formerly available for extra bits.

The warning-light system should be a gadgeteer's delight. Thunderbird-pioneered Seat Belt and Door Ajar lights keep things tidy, but the real innovation here is the array of fiber-optic lamp monitors. For each external lamp, except side clearance markers, there is a corresponding small indicator on the central console which gets its light directly from the lamp through a long plastic cord—the same principle used in model cars for lighting up all the "lamps" from a single source. Chevrolet first used this system as an option last year, and we'd say it is a nice touch.

The electrically powered retracting headlights of the Sting Ray have been replaced by vacuum-powered ones that flip up when the headlight stop is drawn. An override knob under the dash will keep them up while off if they need to be for any reason. The wipers, too, have been hidden under a vacuum-operated panel. This unnecessary contrivance has *two* overriding controls in case it doesn't do the right thing automatically—one to raise the panel, one to stop the wipers dead in their tracks at any position.

Safety influence is seen throughout the interior in recessed, flat knobs, unobtrusive door handles and a smoothly shaped windshield header for both hardtop and ragtop on the convertible that gets rid of protruding latches. The seats are fair but don't offer much in the way of lateral support; what small backrest adjustment the Sting Ray had has been sacrificed to the seatback latches. On the latter point, we respectfully suggest that seatbacks can be adjustable, even with latches.

We expected better ventilation, with provision for cabin flow-through (a decal told us we had Astro Ventilation) and new dash-level raw air nozzles; but it seemed that the available air flow was actually less than in the previous body. Still, heating and ventilation are among the Corvette's strong points, and a properly engineered air conditioning system, installed at the factory, is available.

Let's get down to the test cars at hand. The first car we borrowed from Chevrolet Division was the growling 435-bhp 427 model. From the beginning it was a problem: It seems the stylists didn't provide for adequate flow of air through the engine compartment, and even though the local people had installed a great windmill of a fan it had a marked tendency to overheat both itself and the passengers. Its galloping engine idle was enough to wake the dead, its ultra-stiff suspension was enough to send us searching for the kidney belt we'd stored when we sold our last MG TC, and its fuel consumption (a gallon every 10 miles or so) enough to send even today's teenagers to the poorhouse. Conclusion on the 427/435: everything has been sacrificed to one cause—blinding acceleration. If that's all you need, buy one. If you intend to use your Corvette as transportation, try another combination.

The second test car was a better combination. Though it isn't a new engine now, the 350-bhp 327 is one that we've never road tested. Though it doesn't make such a production of idling as the hot 427, it isn't exactly smooth and quiet about it either. But it does run pretty quietly and tractably at anything above about 1200 rpm, and it has the distinct advantage of not adding 150 lb to the Corvette's already gross avoirdupois. Fuel consumption is more reasonable too, at 13 mpg. But compared with the standard 300-bhp engine it is sluggish until it's up over 3000 rpm. Reason: the 300 develops 360 lb-ft of torque at 3200 rpm, and the 350 develops the same maximum torque at a higher 3600 rpm. If it's instant response you want, get the 300; if it's shifting, get the 350.

Little needs to be said about the familiar Muncie 4-speed gearbox. It's a beauty, and it's quite essential with the peaky 350. One has the choice of t e wide-ratio box (2.52 1st) and a 3.36 or 3.55 final drive, or the close-ratio box (2.20 1st) and a 3.70 or 4.11 final drive. Our car had the close-ratio and the 3.70, probably best for this engine. Clutch action is smooth and light and there's no final-drive noise, though the limited-slip differential made itself known on the test car by an occasional thump as it made up its mind.

Looking toward the front, one doesn't feel quite as buried in the new body as in the old; the window sill is lower and with no vent wings vision to the front is improved. To the rear the deck is even higher than before and with either top in place the outlook to the rear sides is more restricted.

As for handling and ride, there's little change in the 327, quite a lot in the 427. Both now come with wider (7-in.) wheels and Wide tires, so that cornering power is definitely higher. Handling response characteristics have been modified by (1) lowering the rear roll center to cut roll resistance and (2) on 427s, stiffening the front springs considerably. In either case the response moves a bit in the understeering direction. In the case of the 427, which gets its basic front wheel rate raised from 80 lb/in. to 92, plus a larger-than-before anti-roll bar (0.9375 in. vs 0.875), the ride suffers considerably. The 327 test car rode slightly harder than did our 1967 test car because of the stiffer tire-wheel unit. A capsule summary of its handling and ride characteristics would go something like this: great stability and very high cornering power with near-neutral response; good ride on smooth surfaces deteriorating to very poor ride on bad surfaces. Body shake and rattles are still very much a part of the Corvette character.

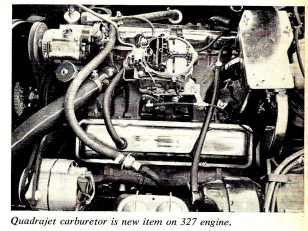
The test car had power-assisted steering and brakes. Neither was very good; the former lacks feel yet takes a lot of effort, and the latter are too light for male drivers. The disc brakes themselves are very good, and so is the basic steering gear. All but the fragile should skip the assists.

A mechanic pointed out that engine service should be easier now with the battery moved out of the engine compartment (it's behind the seats now). Certainly one of the nicest things about the Corvette is that it doesn't require a lot of service—at least in the milder-engine versions. Oil and filter changes come every 6000 miles along with chassis lubrication, and both major and minor mechanical-electrical components tend to be ultra-reliable.

The finish of our 327 test car was not outstanding, but neither was it scandalous. Its body panels were wavy and its paint dull but the interior was all stuck together pretty well. The wiper cover panel wasn't closing completely and some wires were being shorted by the clutch linkage. Our experience with Corvettes indicates that they're usually delivered with several minor things amiss but that once these are corrected the owner can settle down to a long and trouble-free life. The 5-year, 50,000-mile warranty no longer passes free of charge to later owners, by the way—a universal change in the U.S. auto industry this year.

The Corvette 327 remains a comfortable, fast, safe and reliable automobile. For those who like their cars big, flashy and full of blinking lights and trap doors it's a winner. The connoisseur who values finesse, efficiency and the latest chassis design will have to look, unfortunately, to Europe.

Clean rear view, dominated by a modish "spoiler."



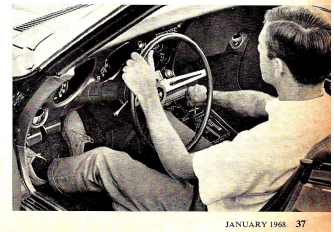
Quadrajet carburetor is new item on 327 engine.

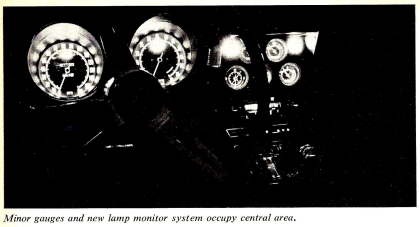
350-HP CORVETTE AT A GLANCE

Price as tested	$5516
Engine	V-8, ohv, 5356 cc, 350 bhp
Curb weight, lb	3260
Top speed, mph	128
Acceleration, 0-¼ mi, sec	15.6
Average fuel consumption, mpg	11-15

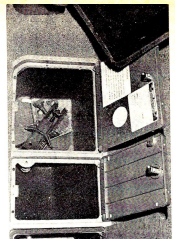
Summary: America's only sports car grows larger and heavier . . . improved driving position but less interior space and luggage capacity . . . larger tires & wheels improve adhesion.

Driving position is improved by lower wheel.

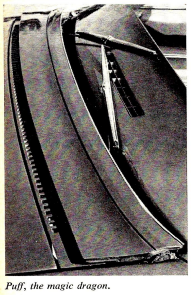




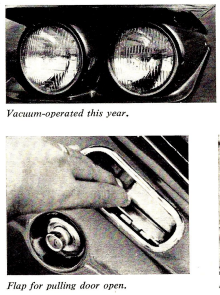
Minor gauges and new lamp monitor system occupy central area.



The stowage area.



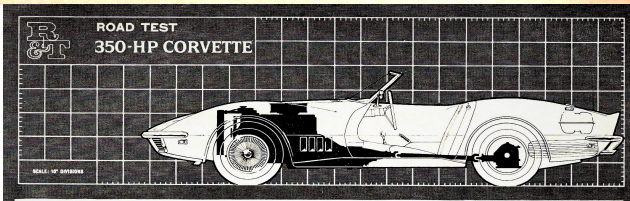
Puff, the magic dragon.



Vacuum-operated this year.

Flap for pulling door open.

Seatback release: usually out of reach.



PRICE

Basic list	$4502
As tested	$5516

ENGINE

Type	ohv V-8
Bore x stroke, mm	101.6 x 82.6
Equivalent in.	4.00 x 3.25
Displacement, cc/cu in.	5356/327
Compression ratio	11.0:1
Bhp @ rpm	350 @ 5800
Equivalent mph	131
Torque @ rpm, lb-ft	360 @ 3600
Equivalent mph	78
Carburetion	one Rochester 4-V
Type fuel required	premium

DRIVE TRAIN

Clutch diameter, in.	10.3
Gear ratios: 4th (1.00)	3.70:1
3rd (1.27)	4.70:1
2nd (1.64)	6.07:1
1st (2.20)	8.13:1
Synchromesh	on all 4
Final drive ratio	3.70:1
Optional ratios	3.36, 3.55, 4.11:1

CHASSIS & BODY

Body/frame: steel ladder frame, separate fiberglass body.
Brake type: vented discs, 11.75-in. diameter; single calipers.

Swept area, sq in	461
Wheels	steel disc, 15 x 7JK
Tires	Goodyear Speedway F70-15
Steering type	recirculating ball
Overall ratio	17.6:1
Turns, lock-to-lock	2.9
Turning circle, ft	39.9

Front suspension: independent with unequal-length A-arms, coil springs, tube shocks, anti-roll bar.
Rear suspension: independent with lateral leaf spring, lateral struts, U-jointed halfshafts, trailing arms, tube shocks.

OPTIONAL EQUIPMENT

Included in "as tested" price: 350-bhp engine, 4-speed gearbox, limited-slip diff, power brakes & steering, removable hardtop, tinted glass, AM/FM radio, adjustable steering column, wheel covers, nylon-cord tires.

ACCOMMODATION

Seating capacity, persons	2
Seat width	2 x 19.0
Head room	35.5
Seat back adjustment, deg	0
Driver comfort rating (scale of 100):	
Driver 69 in. tall	90
Driver 72 in. tall	80
Driver 75 in. tall	70

INSTRUMENTATION

Instruments: 160-mph speedometer, 7000-rpm tachometer, oil pressure, water temp, ammeter, fuel level, clock.
Warning lights: directionals, handbrake, high beams, seat belts, door ajar, monitors for all external lamps.

MAINTENANCE

Crankcase capacity, qt	5.0
Change interval, mi	6000
Filter change interval, mi	6000
Chassis lube interval, mi	6000
Tire pressures, psi	24/24

MISCELLANEOUS

Body styles available: convertible with soft and/or hard top; coupe with removable panels.
Warranty period, mo/mi 60/50,000

GENERAL

Curb weight, lb	3260
Test weight	3525
Weight distribution (with driver), front/rear, %	49/51
Wheelbase, in	98.0
Track, front/rear	58.3/59.0
Overall length	182.1
Width	69.2
Height	47.8
Frontal area, sq ft	18.4
Ground clearance, in	4.9
Overhang, front/rear	40.2/43.9
Usable trunk space, cu ft	6.7
Fuel tank capacity, gal	20.0

CALCULATED DATA

Lb/hp (test wt)	10.1
Mph/1000 rpm (4th gear)	21.6
Engine revs/mi (60 mph)	2780
Piston travel, ft/mi	1400
Rpm @ 2500 ft/min	4610
Equivalent mph	101
Cu ft/ton mi	149
R&T wear index	39
Brake swept area sq in/ton	261

ROAD TEST RESULTS

ACCELERATION

Time to distance, sec:	
0-100 ft	3.7
0-250 ft	6.0
0-500 ft	8.7
0-750 ft	11.0
0-1000 ft	13.2
0-1320 ft (¼ mi)	15.6
Speed at end of ¼ mi, mph	92
Time to speed, sec:	
0-30 mph	4.0
0-40 mph	5.0
0-50 mph	6.1
0-60 mph	7.7
0-70 mph	9.7
0-80 mph	15.0
0-110 mph	20.7
Passing exposure time, sec:	
To pass car going 50 mph	4.0

FUEL CONSUMPTION

Normal driving, mpg	11-15
Cruising range, mi	220-300

SPEEDS IN GEARS

4th gear (5700 rpm), mph	128
3rd (5700)	98
2nd (5700)	75
1st (5700)	56

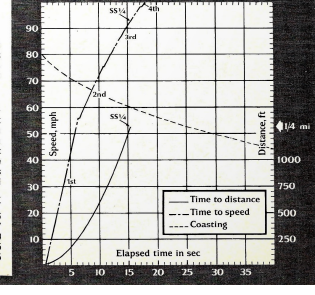
BRAKES

Panic stop from 80 mph:

Deceleration, % g	84
Control	excellent

Fade test: percent of increase in pedal effort required to maintain 50%-g deceleration rate in six stops from 60 mph: none
Parking brake: hold 30% grade: yes
Overall brake rating: very good

SPEEDOMETER ERROR

30 mph indicated	actual 26.7
40 mph	36.6
60 mph	56.7
80 mph	77.0
100 mph	97.5
Odometer, 10.0 mi	actual 9.85

ACCELERATION & COASTING