

CAR AND DRIVER ROAD TEST

# BUICK RIVIERA GS

Happiest on the highway, the GS handles and stops despite its size



PHOTOGRAPHY: M. BRADY

The Buick Riviera has been an unabashed favorite of *C/D* almost from the date of its introduction, though our enthusiasm reached some sort of high water mark in 1965, when the lithe Gran Sport hit the stands. It would therefore seem logical that the latest Riviera GS, sheathed in all that slinky bodywork, should send us soaring like a flock of lovesick pigeons. Certainly the Riviera GS is one of the most beautiful automobiles to reach the American market. Its fastback styling is the most successful effort of its

kind on a car of such formidable dimensions, and its drive train and suspension make it one of the best-performing big cars in history. Therefore, if we loved the old car, we should go clean out of our skulls for the new one, right?

Essentially that is the case. The Riviera GS spent a considerable amount of time in our hands, including a weekend during which we took a long, high-speed, cross-country trip to Indianapolis for the opening session of time trials for the 500-mile race. The GS was pretty much

what we expected it to be, though its approximate two-inch increase in overall length, wheelbase and girth was readily apparent.

Larger size notwithstanding, this Riviera is still at its best on open-road jaunts with two or three people and their luggage. Despite adequate rear seats (note that we didn't say spacious), Riviera owners are advised to limit their complement to three for trips of any distance, because the trunk space is decidedly on the modest side. However, the GS is big enough, both in terms of

overall measurements and engine size, to make it fairly uncomfortable in a crowded urban environment. Its soft but well-located suspension is keyed to negotiating smooth medium-to-high-speed bends, not right-angle intersections, and its two four-barrel carburetors (a dealer installed option yielding 360 hp—20 more than the standard 340-hp single 4-barrel engine) feed its 425 cubic inch engine more efficiently at 50-80 mph than in sluggish city traffic. We're not saying the Gran Sport is bound to protest in congested metropolitan conditions; it's far removed from the high-performance machines that balk at heavy traffic by fouling plugs, stalling, and overheating.

On the contrary, the GS remains composed at all times, although it insidiously punishes its driver by gulping as much as a gallon of gas for every ten miles traveled, and making its increased bulk apparent in every cramped driving maneuver.

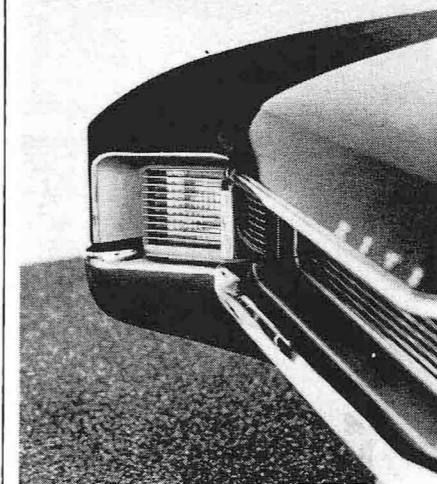
Our test car was equipped with practically all of the available GS options, with the exception of the front bucket seats and console. In their stead came the highly satisfactory bench seat that has enough contouring to create a "bucket" effect for lateral support of both driver and front seat passenger. The console, floor shift, and bucket seat combination gave older Rivieras much of their unique character—without these features, the car loses a lot of its original charm. The absence of the console means that the shift linkage is on the steering column, which makes it more difficult to take advantage of the Riviera's superb Turbo Hydra-Matic three-speed automatic transmission. This unit can be manually down-shifted for additional engine braking or acceleration, but it becomes complicated when the driver is forced to fiddle with the rather inaccessible, somewhat imprecise shifting lever on the steering post. Because the console-mounted shifting mechanism makes it so easy to use the Turbo Hydra-Matic transmission for manual gear-changes, we would recommend that anyone planning to use a

Its quick steering, plus an excellently located three-link rear suspension give the Riviera Gran Sport a level of lateral stability rarely found on a car of this bulk. The GS goes where it's pointed.

GS for vigorous driving spend the extra money for its installation.

The interior of the car is both efficiently conceived and entirely livable—especially with the optional air conditioning that precludes the necessity of opening the cavernous side windows for ventilation. As on the Oldsmobile Toronado (whose body shell it shares), the Riviera is equipped with stylish, one-piece side windows that may be the biggest ever installed on an automobile. Air conditioning makes window-opening unnecessary, as does Buick's excellent interior ventilation system, which is designed to admit air along the cowl, circulate it through the passenger compartment and exhaust it at the rear.

In addition to simplifying the entire equation of door design, the



one-piece windows have the added benefit of reducing interior noise levels, and in this sense the Riviera is superb. Coupled with top-caliber sound damping throughout the body, the slippery shape and the elimination of air turbulence around the windows, the GS is one of the most silent automobiles *C/D* has had the pleasure of testing.

We found the driver's compartment generally hospitable, thanks to a full set of gauges and the proper spatial relationship between the seat, pedals and steering wheel. If we had to register complaints, they would center on the stylish

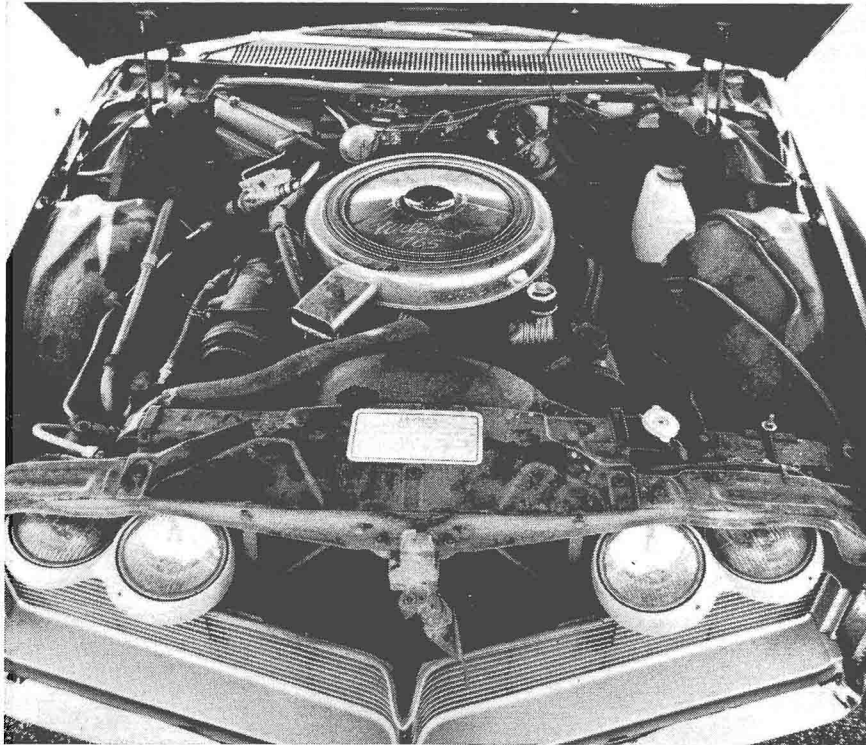
(read confusing) wiper and washer controls, the nearly opaque band of tinting that runs across the top of the windshield, and the cigar lighter and ash tray, which are located a gorilla's arm-length away from the driver's seat. In all, however, the interior of the GS is ideally suited to the civilized driver whose travel requirements make day-long drives a fact of life.

With all of those cubic inches operating under the hood, there is a turbine-like smoothness about the Riviera. The torque multiplication of the Turbo Hydra-Matic is really outstanding, especially at low speeds, and the GS is an exceedingly supple and responsive vehicle, despite its size. Our test car was equipped with the optional 3.42 final drive ratio (a 3.23 is standard), which provides the car with effortless capability for high cruising speeds. On one leg of our trip, we cranked off two hours on a new Interstate highway at better than 80 mph, traveling at sensible levels of both silence and safety. The mileage check gave us 13 miles per gallon—the best we were able to record with the GS.

The optional Gran Sport power steering, featuring a relatively tight 15:1 ratio, was a genuine boon. Obviously the car understeers, but it remains controllable at all times, practically eliminating the danger of plunging into a corner too fast and running helplessly straight on with the wheels cut over at full lock. The quick steering plus the excellently located three-link rear suspension give the GS driver a level of lateral stability rarely found on such a big car. The GS steers where it is pointed, is not vulnerable to crosswinds and will corner with amazing alacrity.

We nevertheless have two basic complaints about the handling; the shock damping and the tires. As in the Buick Skylark we tested in March, 1966, we found the Gran Sport's generally excellent suspension to be hampered by mediocre shock control. Our test car had something over 6000 miles on the odometer and several testers initial-

The GS' finned aluminum front brakes provide ample stopping power, but we'd like to see discs on the Riviera. While we're at it, we'd recommend that Buick use Koni shocks to stiffen up the ride and prevent bottoming.



ly thought the shock absorbers were worn out. This was not the case, because Buicks as a whole seem to employ the least effective shocks in various classes. Obviously their inaction is felt most on rough or undulating road surfaces, where the suspension begins a cycling action that can eventually get the GS out of shape. Bottoming was not as serious a problem as it was with the Skylark GS, though we felt it might become a problem with two people in the rear seat. With its otherwise excellent suspension layout, it seems a shame that such a flaw exists, and we would urge any prospective GS purchaser to include the cost of Koni shock absorbers when considering the overall price.

The Gran Sport we tested carried 8.45-15 Goodyear Power Cushion tires which were just plain spooky in wet weather. Their adhesion wasn't up to the demands of the Riviera's 465 lbs./ft. of torque under acceleration, or to absorbing its considerable side loads under cornering. Perhaps when radial-ply tires become generally available for the Toronado, Oldsmobile's sister division might be persuaded to offer them as optional equipment on the big Buicks as well.

The finned aluminum front brakes that Buick uses on the Riviera are probably as sophisticated as a drum brake can be, though the time has come for the Gran Sport to be equipped with disc brakes, probably on all four wheels. The present brakes will stop the car in satisfactory fashion (with an able assist from the suspension that nullifies nose-dive and rear-axle hop), but this is the day of the disc brake, and General Motors ought to catch up with the times.

As it stands, the Riviera Gran Sport rates high with C/D's enthusiast audience. Our readers voted it the best full-sized sports sedan in the 1966 edition of our Readers' Choice poll. Buick set out to build a big, luxurious, sporting car, and by the number of votes they piled up, they must be doing something right.

C/D

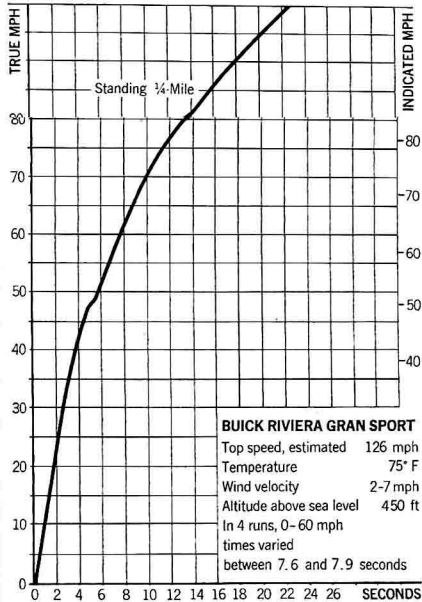
## BUICK RIVIERA GRAN SPORT

Manufacturer: Buick Motor Division  
General Motors Corp.  
Flint, Mich.

Price as Tested: \$6,115.24

### ACCELERATION

Zero To	Seconds
30 mph	2.6
40 mph	3.8
50 mph	5.7
60 mph	7.7
70 mph	10.1
80 mph	13.1
90 mph	17.7
100 mph	22.8
Standing 1/4-mile	.87 mph in 15.9



### ENGINE

Water-cooled 90° V-8, cast iron block, 5 main bearings  
Bore x stroke 4.31 x 3.64 in, 109.5 x 92.5 mm  
Displacement 425 cu in, 6918 cc  
Compression ratio 10.5 to one  
Carburetion 2 x 4-bbl Carter AFB  
Valve gear Pushrod-operated overhead valves  
Power (SAE) 360 bhp @ 4400 rpm  
Torque 465 lbs-ft @ 2800 rpm  
Specific power output 84 bhp per cu in, 53 bhp per liter  
Usable range of engine speeds 500-5000 rpm  
Electrical system 12-volt, 70 amp-hr battery and alternator  
Fuel recommended Premium  
Mileage 10-16 mpg  
Range on 22-gallon tank 220-352 miles

### DRIVE TRAIN

Transmission 3-speed, automatic, plus torque converter

Gear	Ratio	Overall	mph/1000	Max
Rev			rpm	mph
1st	2.08	7.11	11.4	57
2nd	1.48	8.48	9.6	48
3rd	1.00	5.06	16.0	80
Final drive ratio		3.42	23.7	120

Final drive ratio 3.42 to one

### CHASSIS

Cruciform channel frame, all-steel body  
Wheelbase 119.0 in  
Track F 63.5 R 63.0 in  
Length 211.2 in  
Width 78.8 in  
Height 53.4 in  
Ground Clearance 4.8 in  
Curb Weight 4343 lbs  
Test Weight 4835 lbs  
Weight distribution front/rear 54/46%  
Pounds per bhp (test weight) 13.43  
Suspension F: Ind., unequal-length wishbones, coil springs, anti-sway bar  
R: Rigid axle, two trailing arms, track bar, coil springs  
Brakes 12-in. finned drums; bimetallic F, cast iron R; 320.5 sq in swept area  
Steering Recirculating ball  
Turns, lock to lock 3.4  
Turning circle 44 ft.  
Tires and wheels Goodyear Power Cushion 8.45-15 on 6L rim, steel wheels

### CHECK LIST

#### ENGINE

Starting Very Good  
Response Good  
Noise Excellent  
Vibration Excellent

#### DRIVE TRAIN

Clutch Action  
Transmission Linkage Poor  
Synchronmesh Action  
Power-To-Ground  
Transmission Very Good

#### BRAKES

Response Excellent  
Pedal Pressure Excellent  
Fade Resistance Good  
Smoothness Very Good  
Directional Stability Good

#### STEERING

Response Good  
Accuracy Good  
Feedback Good  
Road Feel Good

#### SUSPENSION

Harshness Control Good  
Roll Stiffness Fair  
Tracking Very Good  
Pitch Control Fair  
Shock Damping Poor

#### CONTROLS

Location Excellent  
Relationship Excellent  
Small Controls Fair

#### INTERIOR

Visibility Very Good  
Instrumentation Excellent  
Lighting Very Good  
Entry/Exit Good  
Front Seating Comfort Good  
Front Seating Room Excellent  
Rear Seating Comfort Fair  
Rear Seating Room Poor  
Storage Space Good  
Wind Noise Excellent  
Road Noise Very Good

#### WEATHER PROTECTION

Heater Excellent  
Defroster Very Good  
Ventilation Excellent  
Weather Sealing Very Good  
Windshield Wiper Action Excellent

#### QUALITY CONTROL

Materials, Exterior Very Good  
Materials, Interior Excellent  
Exterior Finish Very Good  
Interior Finish Very Good  
Hardware and Trim Excellent

#### GENERAL

Service Accessibility Fair  
Luggage Space Poor  
Bumper Protection Good  
Exterior Lighting Very Good  
Resistance to Crosswinds Good

