

## Brock Yates' 6.9 Evaluation

### 6.9 Promotional Literature from Mercedes-Benz

**Occasionally, a number of technological advances and engineering breakthroughs come to fruition at a point in time, mandating the building of a car like none that has gone before.**

**This is the genesis of the 6.9.**

**A car Mercedes-Benz has built as an expression of the state of automotive development at the company today. One that stands at the very leading edge of automotive technology.**

**To introduce you to this car, we have selected Brock Yates, one of the most respected writers in the automotive community, to devise a no-holds-barred evaluation. One that would reveal the full potential of this extraordinary car.**

**Mr. Yates' articles appear frequently in leading general interest and automotive magazines. For the past ten years, he has been deeply involved in both competitive driving and automotive testing at Daytona, Watkins Glen and other tracks in the U.S. and Europe. He is the author of "Sunday Driver," a book detailing his many racing experiences.**

**In accepting this assignment, Mr. Yates imposed only one condition: that he be permitted to describe negative aspects as well as the strengths of the 6.9. We had confidence enough in the 6.9 that we readily agreed. The observations in the following article, then, are Brock Yates' own.**

Southbound. Toward the early Georgia springtime. The angular gray cliffs of Manhattan were behind us and we were moving effortlessly through the bustling truck traffic of the New Jersey Turnpike. Our CB radio was babbling about road conditions and our automobile, a shimmering silver 6.9 Mercedes-Benz, was restlessly eager to break free of the congestion and stretch its long road legs. My son was riding shotgun in the front passenger's seat, while automotive photographer Don Hunter was lounged in the blue leather in back. The trunk was loaded with cameras and luggage for a trip toward one of the most challenging stretches of roadway in the western hemisphere. There we intended to undertake a special test for the special automobile that operated at such an easy gait beneath us. Yes, a special test, because a conventional examination of this machine would no more challenge its capabilities or measure its excellence than a long drive in a cautious 55-mph turnpike convoy.

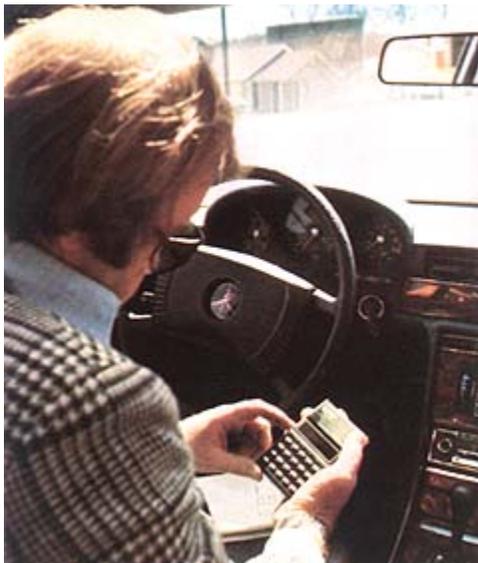


At its best, testing automobiles is a vague and inexact science. Batteries of instruments can make their measurements, yet the evaluation inevitably reduces itself to a subjective relationship between car and driver. There are automobiles that will produce wonderful test results, yet are dreadful to drive. Others present impressive pedigrees and perform like aged mongrels. After one spends a number of years wedged and curled behind the steering wheels of everything from miniscule economy sedans to fiery, custom-built grand touring machinery he develops a sixth sense about new cars. Flashy external shapes fail to delude him, and he understands that the world is populated by all types of automobile manufacturers, a small cadre of whom are high-minded craftsmen with decades of proud tradition behind them.

Certainly Mercedes-Benz falls into this group. Some critics will argue that the cars are costly and mechanically complicated, but there is hardly a sane expert in the world who will dispute the fact that Mercedes-Benz is among the representatives of the highest standards of the automotive art. I have stated publicly and without solicitation my opinion that the 450SEL is the best all-around car in the world, and I will stand by that contention. I like the way the Mercedes-Benz feels at speed, the firm resolute way they negotiate corners and stop; the comfort they provide in the kind of long-haul highway travel that I enjoy so much, always accompanied by vault-like strength and safety.



The continuity of design philosophy maintained by a firm like Daimler-Benz AG presents certain advantages when a new model is introduced. I know before driving the machine that high standards of quality and fabrication will be met; I know too that road-holding, steering, stopping and passenger safety will not be compromised; and I am confident that the new automobile will attempt to make some major engineering statement that transcends simple commercial instincts.



These things I know regardless of the numerical results. Such readouts act more as technological footnotes to a built-in, personal faith that any new Mercedes-Benz will represent a "best" effort by the world's oldest automobile manufacturer. That effort might occasionally be surpassed by other makes in terms of acceleration, gas economy or a dozen other test parameters. And here is where the road tester can become fascinated by brief, spectacular achievements in a controlled test situation and lose sight of the broader motivation of a company like Daimler-Benz, which does not produce automobiles intended to succeed in narrow ranges, i.e., only in passenger comfort or only in high-speed

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performance or only in economical running, but rather across a broad spectrum of excellence. In this sense all Mercedes-Benz cars are elegant compromises, embodying an ambitious urge to achieve blanket superiority as opposed to specific strengths.

When I first heard of the 6.9 I believed I understood exactly what Mercedes-Benz was setting out to achieve. In keeping with their tradition for making automobiles with multiple capabilities, they seemed to be undertaking the challenge of designing a car with (1) the all-out performance characteristics of a world-class sports car combined with (2) the interior silence, appointments and riding qualities of the finest luxury sedans plus (3) the highest standards of quality.

This had been tried by the company once before in the form of the 300SEL 6.3, introduced in 1965 and built on the chassis of the earlier S-series sedans. However, the balance with this particular car was in favor of outright speed, with less emphasis on luxury. As with the 6.3, the new car employs two existing components from the Mercedes-Benz lineup - the large displacement, lightweight V-8 engine of the wondrous 600 limousine and the body-chassis complex of the current S-series four-door sedan. The 600 engine has been enlarged by slightly over one-half liter (about 30 cubic inches) from 6.3 liters to 6.9 liters (approximately 420 cubic inches) and fitted with dry-sump lubrication and a simpler, mechanically operated version of the Bosch K-Jetronic fuel injection system. But perhaps most important is the new suspension, which replaces traditional steel springing with a special hydropneumatic arrangement capable of providing flat, stable cornering regardless of passenger loads, in accompaniment with a soft, pleasant ride. These two components, the powerful engine and the special suspension, are the heart and soul of the 6.9.



As we slipped by the other southbound traffic on Interstate 95, perhaps one driver in a 1,000 had the acute eye and sufficient automotive sensibility to realize what sort of machine was briefly in his presence.

After six hours of high-speed driving, the real value of the large steering wheel and firm seats became apparent - the wheel now seemed an ideal diameter and the state of my back - prone to aches and cramps after extended drives in poor seats - felt excellent. The 6.9 was propelling us along at an effortless canter, accompanied only by the low murmur of the engine and the faint whine of the wind. I was convinced I could drive on forever.

We reached the Road Atlanta road racing circuit 10 miles south of Gainesville, Georgia in 14 hours. We had come 870 miles with almost shameful ease, stopping several times for food and fuel, to cleanse the car of road grime and to take pictures. Given an enlightened super-highway driving environment (as on the German Autobahns, where in many cases there are no speed limits) there is no question that we could have accomplished this trip in 10-11 hours with only a minor penalty in fuel mileage (which averaged 12.8 mpg).

Those familiar with motorsports agree that Road Atlanta is one of the two or three most challenging and difficult road racing circuits in North America. Winding across 2.52 miles of wooded, rural Georgia countryside, it is the scene of several major sports car events each year. Lap times vary widely, indicating that good cars and good drivers have a vivid advantage. On simple circuits even the incompetents can find speed and therefore run nearly as quickly as the champions.



The track is known for a collection of ess-bends - one slow series that leads to a faster, downhill set-plus a straightaway that is really a connection of very fast right-hand bends leading to a stomach-churning blind curve that winds around a bridge abutment at the crest of a steep hill. For the most part the driver at Road Atlanta is flying blind, using landmarks along the road to set up his automobile for the corner that lies ahead. Not only is Road Atlanta a challenge for the driver, but a car is severely tested as well. The same elevation changes that make it so difficult to navigate also impose enormous strains on suspensions and brakes. There are three places on the circuit where the road leads downward into a low spot, then tilts sharply upward, causing weak suspensions to bottom out. Moreover there are seven corners per lap that demand severe braking.

My initial impressions of the 6.9 were that the machine had so much reserve strength that any normal testing procedures would barely make it flex its muscles. But at Road Atlanta things would be different. All race tracks, fast or slow, impose staggering loads on passenger cars. A new car, seemingly endowed with great power and reliability; can be reduced to a pile of leaking, steaming iron in a matter of four or five hard laps. The brake linings begin to fry and brake drums and discs start to warp. The brake fluid boils and the wheel cylinders may rupture under the strain. Shock absorbers heat up and go flaccid and rubber suspension bushings begin to flex. The engine heat increases radically and the coolant begins to boil. Because the crankcase is generally not properly baffled, hard cornering will cause the oil to slosh wildly from side to side, prompting the pressure to fluctuate and producing the clear

danger of frying a bearing. Really fast driving can also cause the ignition to break up at high rpm's and the engine to sputter as high cornering forces starve the fuel supply to the carburetor.

I estimate that there aren't a dozen production sedans in the world that could be driven really hard for 10 laps or 25 miles around Road Atlanta without suffering severe mechanical ailments.

Therefore I posed what seemed to be a legitimate challenge for the 6.9 - 100 miles around Road Atlanta; 40 laps at speed. If such a distance could be accomplished without difficulty, the capacities of this automobile would far surpass anything outside a few lightweight, two-seaters and beyond the realm of comprehension for a heavy, four-door luxury sedan.

There would be no modifications to the car. Our 6.9 would run its 100 miles in exactly the same trim in which it was driven from New York with two exceptions. I added five pounds of air to the 215/70 VR 14 Michelin VXX tires (primarily to reduce wear, in consideration of the fact that we planned to drive back to New York on the same set of tires) and filled the gas tank to check consumption along the way.

I began the run in bright midday sun, estimating the 100 miles to take a bit over an hour. But because I was uncertain of the limits of the car - especially the cooling system and the tires, which were simply not designed for all-out race track operation (as racing tires are equally unsuitable for the street) - I decided to begin the test at a rather cautious pace. The big machine bustled down the main straight and lunged up the broad hill that led to the tricky maze of ess-bends. I was using the three-speed automatic gearbox in a manual fashion, downshifting to second for the tighter corners. The car moved gracefully through the twisting section with minimal body lean and little more than a low whistle from the sliding tires. On the long straightaway I upshifted at 5,000 rpm (the recommended redline) and felt a surge of power. As the braking point at the end of the straight rushed up, I spotted the speedometer needle hovering at about 122 mph.

After five laps the water temperature needle moved upward perhaps ten degrees. Sensing potential overheating, I eased up slightly, shifting gears at 4,500 rpm and applying the brakes a few yards earlier at the entrances of sharp corners. Five more laps and the needle stabilized at about 200 degrees (F) and the car seemed unconcerned. I upped the pace again, this time feeling much more comfortable with my surroundings. I had only raced once at Road Atlanta and my exposure to the nuances of the circuit was limited. But after 20 miles, both



the 6.9 and I were settling in for some hard running. I discovered that the quickest way to circulate the track was with a single gear change per lap. I would shift up to third at the beginning of the straight then catch second at the end and hold it for the rest of the lap. In this way I could nudge the car past 100 mph on the short pit straight and by hard cornering onto the long chute (thereby keeping the rpm's up) I could push toward 125 mph before having to brake. In driving parlance, a brisk pace on the highway is sometimes described as 5/10th, while a flat-out, no-holds-barred lap of a race track is measured at 10/10ths. In view of my lack of experience with the 6.9 and its outer limits (not to mention its expense) I was not running 10/10ths, but rather in the range of 8/10ths. I recalled an earlier conversation with one of the track officials who said that five hard laps with his sports car would render the brakes useless and produce dangerous engine heating. At that point I had run four times that distance with a car weighing nearly 4,500 pounds with no evidence of trouble.

On we went in almost complete aplomb. I was wearing a woolen sport coat and expected to be perspiring heavily after a few laps, but the ease of control kept me cool and dry I was able to circulate with little jostling and bouncing, and no fierce corrections with the wheel. At 120 mph, I slipped open the sun roof and made a lap with the radio playing. This was perfectly practical in terms of wind noise and general listening pleasure, but I shut the sound off and went back to work, fearing that a music-induced lapse in concentration might bend some very expensive sheet metal.



I pressed for the last 15 miles, feeling the automobile had plenty in reserve (in fact, much more than I had estimated at the beginning). Aside from a slight oscillation that began to appear in the brakes over the last few laps and the desire for a lower gear ratio to boost me off the slow corners more effectively I could find nothing to complain about during the entire run.

It was over in one hour and twenty minutes, with an average speed just over 72 mph. The car rolled into the pits and aside from a slight, completely normal hissing sound as the hydropneumatic suspension readjusted itself, the 6.9 was behaving as if nothing had happened - much like a strong, young thoroughbred after an early morning exercise. This incredible machine had just been flogged for 100 miles on one of the most rigorous stretches of road to be found anywhere and it was now appearing to shrug its shoulders and await the next challenge! Barring a slight scuffing on the left side tires - owing to the predominance of right hand corners at Road Atlanta, and some black flecks of brake lining on its alloy wheels, the 6.9 looked as if it had just returned from a low speed tour through Central Park.



I drove it back to Manhattan the following day without even bothering to reduce the tire pressures. If you doubt that the 100 miles were undertaken with some vigor, the full-throttle operation for such a long period knocked the gas mileage down to 5.9 mpg. Hardly an economy record, but obviously such a test exacts some penalties for such speed and power.

The trip back to New York was as effortless as the run south and presented ample opportunity to ruminate about the machine. Aside from observations that bordered on the downright silly, i.e., my magnetic CB antenna that stayed glued to the roof through it all or the oil dip stick that refused to reveal itself until somebody recalled that the engine had a dry-sump system (the tank and dip stick are stowed in the right-front fender), the central theme of my impressions about the 6.9 was its staggering reserves of strength. I have never been in an automobile that could do so much so well - that was so exquisitely balanced between blatant power and unabashed luxury.

I have been behind the wheel of many cars, but none that are better over a broader range of excellence than the 6.9. I think the 100 miles at Road Atlanta speak for themselves. Should you know of a four-door sedan that you think might do better I recommend you contact the management at Road Atlanta. They have a daily rental rate that is quite reasonable and the test is simple; 100 miles or 40 laps as fast as she will go without breaking. Of course it is a gentleman's agreement that no modifications whatsoever other than slight tire pressure adjustments will be made before the run starts. It is also understood that the run will actually begin and end in Manhattan, creating a total of about 1,640 hectic but fun-filled miles that should tell you more about the overall excellence of an automobile than three weeks of conventional testing.

I know. I did it. If you think your favorite car can do better Road Atlanta is waiting.

A handwritten signature in black ink, which appears to read "Brock Yates". The signature is written in a cursive, flowing style.

*Brock Yates*

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