



Although their technology spans a 55-year gulf, the 300 SL and the new SLS AMG share more than their door design.

By Jim Koscs

Gullwings

Across the Centuries



IT TAKES NO SMALL MEASURE OF AUDACITY — BRIMMING confidence at the bare minimum — to introduce a new production model that so vividly evokes the classic car voted “Sports Car of the Century.” Mercedes-Benz can be given much leeway for expressing said audacity. At the 2010 Amelia Island Concours d’Elegance, the brand’s iconic 1954-1957 300 SL comes grille to grille with a Mercedes supercar for the 21st-century, the 2011 SLS AMG.



Who could argue that the Mercedes-Benz 300 SL was not the world's first supercar? The curious-looking doors that opened into its roof were borne of engineering necessity, a legacy from the racing car from which the road car sprang. Their appearance when opened inspired the car's "official unofficial" name: Gullwing. Owners and enthusiasts embraced and celebrated the moniker, and so did the car's maker.

Even before the first customers take delivery of the rightful heir to the Gullwing title, allusions to its clear forebear have been swirling around magazine pages and blogs.

■ *The 300 SL, along with its little brother, the 190 SL, was the first production Mercedes-Benz to have its world premiere in New York City on Feb. 6, 1954.*

The manufacturer takes no umbrage. To the contrary, the SLS AMG was designed to echo the 300 SL in the most definite terms possible -- starting with the doors.

Win in 1952, Sell in 1954

EVEN IN THE PRE-BLACKBERRY® ERA, NEWS of major racing victories spread quickly enough. A stunning one-two victory at the 1952 Le Mans, and another one-two winning punch in Mexico's famously dangerous 1,900-mile Carrera Panamericana, were cause for sports car fan astonishment. The small, teardrop-sleek Mercedes-Benz coupe



■ *The 300 SL marked Mercedes-Benz's return to competition. It was first tested in 1951 and presented to the German press on March 12, 1952, making its race debut in the Mille Miglia on May 4. Three cars were entered for Rudolf Caracciola, Hermann Lang and Karl Kling. Kling finished second and Caracciola was fourth.*

that posted those and other wins had seemingly come from nowhere.

Even to company directors, such a triumphant return to racing, so soon after digging out from the rubble of World War II, and in the face of formidable competition, was not fully anticipated. Their plan to quickly concoct a sports racer using existing parts — namely from the all-new 300 luxury sedan introduced for 1951 — is said to have been inspired by the new Jaguar C-Type winning the 1951 Le Mans. The C-Type housed the production-based drivetrain of the XK120 road car in a special chassis, wrapped in sleek, lightweight bodywork. Why not a similar approach from Mercedes?

Passenger car engineering chief Rudolph Uhlenhaut and his team answered the challenge and had a car ready in just nine months, internally designated as the W194 and named 300 SL.

As a starting point, the big Mercedes 300's new 3.0-liter overhead-cam inline six, four-speed transmission and four-wheel independent coil-spring suspension (by swing-axle at the rear) were cutting edge for the day and certainly sophisticated enough. Tuned for a luxury car, the six made an honest 115 horsepower. Uhlenhaut tweaked it to 171 hp, about 30 shy of the Jag C-Type's DOHC six.

The chassis was Uhlenhaut's design, a true space frame with triangular sections designed for maximum rigidity. The high sill area left no room for conventionally hinged doors. The form-follows-function solution, hinging them at the roof, was certainly the most memorable "workaround" in sports car history.

"SL" stood for "Sport Leicht" (Sport Light), but at about 1,900 pounds, the car was not as "leicht" as planned. Uhlenhaut countered with an aerodynamic body; the new sports racer was not so much designed as shaped by necessity. Achieving minimal frontal area and a low coefficient of drag required tipping the tall engine at a 50-degree angle, which necessitated a dry-sump oiling system and other modifications.

After winning the 1952 Carrera



■ The 300 SL, driven by Karl Kling and Hans Klenk won the Carrera Panamericana in 1952. During practice the pair had a "moment" when they were hit by a low flying buzzard. Typically, Mercedes had the right fix.

Panamericana — which Mercedes had entered at the urging of race legend John Fitch — the W194s were slated for retirement as Mercedes turned its attention back to Grand Prix racing. The idea of a production version of the 300 SL was dismissed — at first. The company's new U.S. importer, Max Hoffman, insisted that such a high-end sports car with fresh racing provenance was just what Mercedes-Benz needed to wow affluent American customers.

A true impresario of the European import auto business, Hoffman fully grasped the idea of an "aspirational" car. He backed up his conviction by making a deposit for 1,000 cars. He also placed orders for a second model that he felt would benefit from the 300 SL's halo effect — the four-cylinder 190 SL derived from the far simpler 180 sedan but closely resembling the 300 SL. (The "halo" worked; Mercedes sold 26,000 190 SL's worldwide through 1963.)

In February 1954, just six months after Mercedes gave the green light for its new sports car duo, Hoffman's instincts were tested. The 300 SL made its world debut in New York at the International Motor Sports Show, with a 190 SL prototype alongside it.

Only if one of the decade's sci-fi flying saucers had also landed at the show could the 300 SL have been upstaged. The brazen new Mercedes sports car positively mesmerized the show's visitors. Check writing began in earnest for a car that would retail for over \$7,000 when production models arrived stateside a year later.

Back to the 'Sports Car of the Future'

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of the art in sports cars. When exactly the car became known as the Gullwing is not chronicled. If the 300 SL's stunning body suggested something futuristic, the engine and chassis delivered on the promise. Lifting the hood revealed a techno-marvel as visually arresting as it was powerful.

The site of a cast aluminum intake manifold, with individual 17-inch ram pipes, could make even a sextuplet of Webers look old. It's what fed fuel to the engine that really presaged the future - something never seen in an automobile before, and something even the W194 racecar didn't have: mechanical direct gasoline fuel injection.

The performance lived up to the visual presentation. The 3.0-liter engine's 220 hp (SAE) at 5,800 rpm was a 50-hp bump over the W194 racecars. An optional Sport Cam boosted power to 240 at 6,100 rpm, and many owners later added it during engine rebuilds. A 300 SL could sprint from zero-to-60 in under eight seconds and top out at 140-plus mph, depending on the chosen axle ratio.

Stainless steel exhaust headers were mostly hidden by a polished aluminum heat shield. What only the most discerning owners or their mechanics saw, however, revealed much about the engine's race-bred character: Each was tested extensively on a dynamometer before it left the factory, and each had its compression ratio and timing specs stamped into the cylinder head. Just knowing the information was there, reinforced the racer-cool vibe.

Undoubtedly, many Gullwing buyers were so smitten with the car's design that deep knowledge of its racing roots was not necessary to close the deal. Pablo Picasso bought one, and so did William Randolph Hearst. Sophia Loren received a Gullwing as a gift from her husband.

The Mercedes designers remained faithful to the form-follows-function credo, yet their eye for beauty was undeniable. (The 540K Special Roadster of the 1930s was, remember,

an internal design, not a coachbuilder creation.) The 300 SL adopted the basic contours of the W194, but livened them up considerably with a far more elegant front end and exquisite detailing, including "eyebrows" over the fenders. The egg crate-style front fender outlets ducted engine heat and inspired many copycats.

The Gullwing's body was steel, with aluminum used for the hood and trunk panels, rockers and door skins. Compared to the original W194 racers, the production 300 SL was far more civilized - and also about 800 pounds heavier. An optional all-alloy body



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cut that by about 170 pounds, but only 29 such cars were made.

Beneath the radically beautiful body was essentially the same racecar that won Le Mans in '52. As in the W194, the space frame chassis made no allowance for conventional doors, so the 300 SL inherited the racer's roof-hinged alternatives.

Entering such a sleek machine through a hatch seemed perfectly in tune with the budding space age. Climbing over the wide sills took dexterity, but the effort was rewarded with interior quality and comfort suitable for everyday driving or long-range touring.

Pop-out windows and wind wings provided ventilation. Optional luggage was specially fitted for the area behind the seats, since the trunk was mostly occupied by the 34-gallon gas tank and spare wheel.

Four-wheel independent suspension also made the leap from racecar to road car and trumped the typical solid-axle rear ends on other sports cars. The Jag XK140 may have impressed with its four-wheel disc brakes, but the Gullwing's big Alfin drums were more than up to the job.

Although the 300 SL made its outstanding handling accessible even to casual drivers,





it truly shone in skilled hands. Just as important to Mercedes customers was that the Gullwing really could be used as a daily driver at a time when most high-end sports cars could be fickle about such duty.

Even today, some 300 SL owners routinely drive hundreds or even thousands of miles to participate in club events. When the Mercedes-Benz Classic Center has entered 300 SLs in road rallies, their reliable performance pleasantly contrasted with cars of similar vintage pulled to the roadside for adjustments or repairs.

Tractable enough for the road, the production Gullwing proved to be quite the racer as well, and was an especially adept rally car. Fitch won the GT class in the 1955 Mille Miglia driving a bare-bones but otherwise stock 300 SL. The rally team of Walter Schock and Rolf Moll won the European Touring Car Championship in a 300 SL and a 220 sedan. On American road courses, Paul O'Shea won SCCA national titles with his Gullwing in 1956 and 1957. More recently, in 2005, Fitch -- at age 87 -- attempted several speed records at Bonneville in a 1955

■ *Something old, something new: The 1955 Mercedes-Benz 300 SL and the 2011 SLS AMG in the Red Rock Country of Sedona, Arizona.*

Gullwing. The adventure was captured in the film "A Gullwing at Twilight," which debuted on PBS.

In 1955, *Road & Track* magazine said this after road testing the 300 SL: "We are looking at a car where a comfortable interior is complemented by remarkably impressive handling characteristics, quite incredible roadholding, light and precise steering, and performance levels which are up there with -- and even an improvement on -- the best cars the automotive industry has to offer. There is only one thing left to say: the sports car of the future has become a reality."

Hoffman knew his business well: Mercedes-Benz built 1,400 copies of the vehicle that forever changed sports car design and engineering, sending three-quarters to the U.S.

21st-Century Gullwing

THE PROSPECT OF A NEW-GENERATION Gullwing has never been far from the minds of Mercedes-Benz designers and engineers. The various C111 experimental cars from the late 1960s through the 1970s and the 1991



SLS AMG weighs some 400 pounds less than some high-performance sports and GT cars. And its 800 pounds over the 1954 Gullwing is downright amazing when you tally up the 21st-century powertrain, safety and luxury.

Though heavier than the W194, the production 300 SL was fairly light for such a high-performance sports grand touring car.

The common thread between the 1954 Gullwing and SLS AMG, however, is that both were designed to devour the road or track and to not tax the driver while doing so. The executions are markedly different, of course. The SLS AMG boasts well over double the 300 SL's horsepower from its hand-built AMG 6.3-liter V8 -- 571 hp and 479 lb.-ft. of torque, to be exact. With the engine mounted behind the front axle line, and a rear-mounted transaxle, the SLS AMG distributes its mass in a 47:53 ratio.

The SLS AMG's seven-speed dual-clutch automated manual transmission is Formula One paddle shift technology for the road. The resulting performance is as breathtaking today as the original Gullwing's was 55 years ago, though measured on a different scale: zero-to-60 in 3.8 seconds, and a 196 mph top track speed for the SLS AMG. AMG compound brakes, or the optional ceramic-composite versions, yield enormous stopping power. The massive AMG wheels and specially developed tires dwarf anything from the 1950s.

While the SLS AMG design unmistakably conjures the 300 SL like a ghost across the decades, anyone who mutters "retro" will be dismissed. The hood stretches nearly 6 feet, yet sightlines from the cockpit are clear. The grille with its central star, the hood detailing and the fender vents all pay homage to the original -- but in an original fashion.

Gullwing doors may have been an elective element for the SLS AMG, but they are practical as well, taking less room to open than conventional doors. The elegant simplicity of the SLS AMG's interior, with typical Mercedes-Benz quality and custom touches available, honors the 300 SL and also draws cues from aircraft. Five decades of safety advances, many innovated by Mercedes-Benz, provide much assurance, including eight airbags and dynamic handling aids.

What will we say about the 2011 Mercedes-Benz SLS AMG in 50 years' time? Probably that it earned a rightful place next to the 300 SL. And, like that first Gullwing, perhaps the SLS AMG will be voted sports car of its century. ♦

CT12 prototype suggest as much. But in a market abounding in exotic machines from Asia, America and Europe, how do you create a car that can deservedly be called "the new Gullwing"?

For the answer, Mercedes-Benz turned to its performance division, AMG. More than 40 years of AMG's racing (and winning) experience seemed the appropriate prerequisite for the task. The original Gullwing was borne of racers' vision, and the new Gullwing would be as well.

Although their technology spans a 55-year gulf, the two share more than their door design. With its aluminum space-frame body shell, the SLS AMG was built for maximum strength and light weight. And indeed, the

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