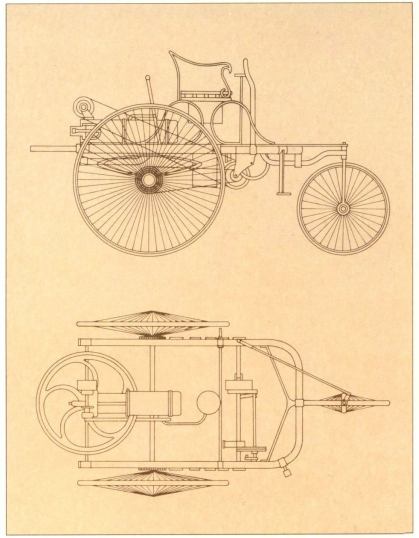
MERCEDES-BENZ

1983

What makes a Mercedes-Benz a Mercedes-Benz.

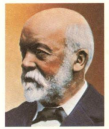
The founders of Mercedes-Benz invented the automobile. They also invented a stubborn and singular philosophy of excellence. For 1983, as for 97 years, the result is a series of automobiles engineered like no other cars in the world.



These drawings accompanied patent issued for first Benz automobile on January 29, 1886.

Every automobile since the beginning of automotive history has been a compromise. Every automobile must strike a balance between the desirable and the possible.

Maximum economy and maximum performance cannot be had from the same engine. The softest ride and



Gottlieb Daimler

Karl Benz

the optimum handling cannot be had from the same suspension. The most interior space and the greatest maneuverability cannot be had from the same chassis. The most quality cannot be had for the least price.

Automotive designers must, therefore, delicately juggle all these factors, attempting to score as high as possible in every area—without giving up too much in any other area.

Namesake of Mercedes cars was Mercedes Jellinek

A Mercedes-Benz is designed to sacrifice less than any other car. It is designed to be the most perfectly *balanced* automobile possible. This fact is the key to the character and the utility of Mercedes-Benz automobiles. It is what ultimately makes a Mercedes-Benz a Mercedes-Benz.

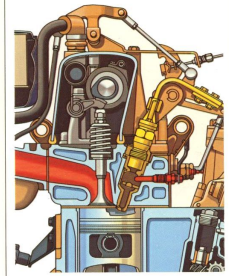
1914 *A 37/95 Mercedes wins the Vanderbilt Cup race, Santa Monica, California. Painting by Peter Helck.*

They rigorously persevere. Every Mercedes-Benz is meant to perform every vital function as well as possible, not only a few specialties.

A Mercedes-Benz is built to be rugged, enduring, reliable. Yet it does not ride like a truck or stint on comfort. A Mercedes-Benz is meant to be docile and easy to drive. Yet it aspires to the highest levels of roadholding skill. And on and on, the goal not extremes in any one category but extreme competence overall.

The vaunted Mercedes-Benz quality is an offshoot of this quest for balance. There is no cheap or slipshod way to combine so many abilities in one automobile. The desirable ride and handling combination dictated fully independent suspension, not five but fifty years ago. Safe braking under stress demanded four-wheel disc brakes. The paint job is not merely handsome; it helps resist corrosion. Safety is part of this balance. The designers feel an obligation to make the car as safe as possible, in the same way they strive to make it efficient.

The English authority

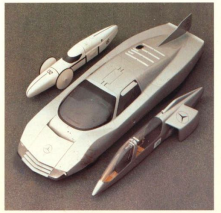


Detail of the 2.4-liter engine that powers the Mercedes-Benz 240D.

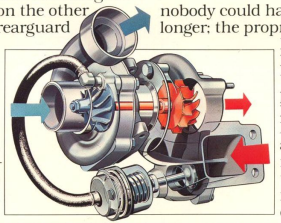
L.J.K. Setright has written a passage that places this unique philosophy in historical context:

"Nobility is a quality that is not easily attained in the motor industry. Inheritance of it is possible, but the history of the industry is not so long that we could forget how such a distinction was originally earned. In the case of Mercedes-Benz, whose right to a place in the highest rank of car manufacturers must be undisputed, the testimony of the past is supported by evidence of the present, for they continue to wage the double campaign that they have fought since their earliest times—on the one front, to be in the vanguard of scientific and technological progress, on the other to fight a rearguard battle against the social and commercial temptations that have introduced the mean and the compromising to corrupt the standards of other manufacturers. For more than ninety years they have pursued these ideals, and nobody could have done it longer; the proprietors of Mercedes-Benz are the company Daimler-Benz AG, an amalgamation of the two firms that created the motor car and the industry that eventually grew up around it."*

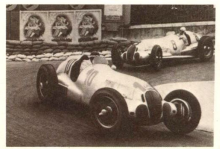
The 1983 Mercedes-Benz model line is fully described on the pages that follow.

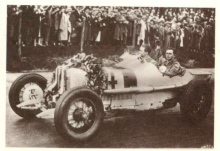


Diesel "economobiles," capable of up to 3,020 mpg, flank the 200-mph C-111/3 research car that pioneered the high-performance turbodiesel engine.



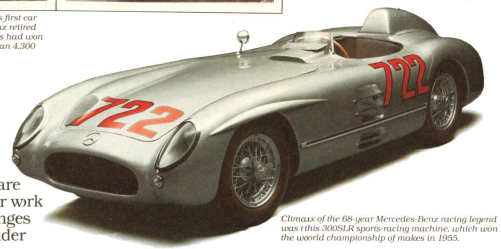
Added to the five-cylinder Mercedes-Benz diesel engine, this turbocharger boosts power by an amazing 45 percent.



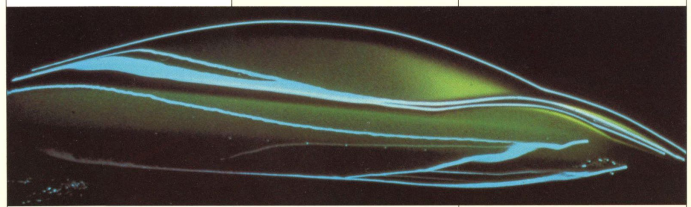


A Daimler-powered car won the world's first car race in 1894. By the time Mercedes-Benz retired from racing seven decades later, its cars had won five world championships and more than 4,300 individual competitions.

This aim is so long-standing at Mercedes-Benz that the engineers know no other way to approach the design of an automobile. They are not distracted in their work by annual model changes or the impulse to pander to fads. They retain the courage to believe that they know more about how an automobile should be designed than any styling consultant or market research wizard.



Climax of the 68-year Mercedes-Benz racing legend was this 300SLR sports-racing machine, which won the world championship of makes in 1955.



Mercedes-Benz of the future? An aerodynamic exercise.

Mercedes-Benz Roadsters... Queens

Printed in United States

240D

"Probably the most pedigreed four-cylinder automobile in the world."

Literally hundreds of automobiles today preach the doctrine of maximum possible efficiency. The car depicted at left is unique. It is the only automobile today that can preach the doctrine of maximum possible efficiency and couple it with all the benefits of a Mercedes-Benz.

This double set of virtues has helped make the 240D Sedan one of the most popular Mercedes-Benz models ever sold in America. Explore and savor its particulars. You may find the 240D as eminently sensible and satisfying a machine as its popularity suggests. You may choose to buy it. A third mighty virtue then arises: a price—through omission of certain nonessentials—some thousands of dollars below any other Mercedes-Benz model.

The 240D weighs about one and a half tons, and easily accommodates five adults and 12.6 cubic feet of luggage. Its per-

DIESEL

formance in a test drive moved one writer to marvel: "...once you're at 80 it'll stay there till you run out of fuel—which will probably be quite a few hours later." The source of its power and frugality is a 2.4 liter, four-cylinder diesel engine. One secret of its running gusto is the exclusive pre-combustion chamber provided for each cylinder. One secret of its running smoothness is the ball pin fitted into each chamber to evenly diffuse the injected fuel. (This sophisticated powerplant even has a *barometer* built in: it helps adjust the fuel/air mixture to maintain engine efficiency as the car moves far below or high above sea level).

Four-speed manual shift is standard 240D equipment.

Four-speed automatic is a useful extra-cost option.

Right-hand outside mirror is electrically adjusted by driver.

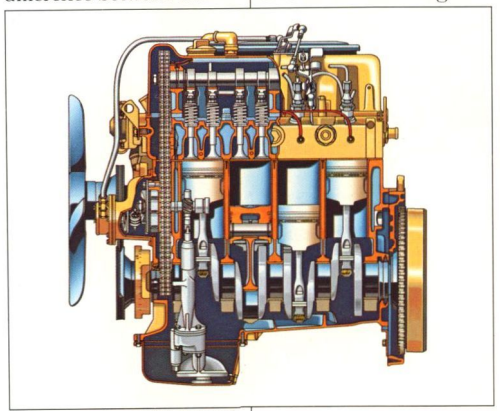
The 240D uses barely a quarter of the fuel burned by a like-sized gasoline engine at idle: what a boon for city drivers. It needs no conventional tune-ups; what a boon for all drivers. If the durability of Mercedes-Benz diesels is part of the legend, part of the reason may be that they rank among the most expansively machined and finished engines in the world.

The 240D's running gear and drivetrain are painstakingly designed to preserve what its engine conserves. A quick and clean-shifting four-speed *manual* transmission, floor mounted, is standard. You can at extra cost replace it with a four-speed automatic—and suffer a tiny drop in fuel mileage.

Contoured rear bench seat easily accommodates three persons with its almost five-foot width.

The engine and suspension are mounted on separate subframes fixed to the car's body by numerous rubber mountings that absorb shocks and help subdue noise. The body is of the stressed-skin or unit type, heavily welded, very rigid. Suspension is fully independent at all four wheels in the classic Mercedes-Benz manner, so that the tires do not combat rough roads so much as gently comply with them. Cornering power is high. Front and rear anti-sway bars are one reason the 240D refuses to roll or lurch heavily in turns.

There is no significant difference between the driving controls in the 240D and the costliest Mercedes-Benz sedans. You are well situated for restful but alert hours behind the wheel: big, supple bucket seats; a discreetly servo-assisted steering mechanism smoothing your work with 24 recirculating ball bearings; electronic cruise control and a comprehensive air conditioning system. The heating and ventilation controls permit each front seat occupant to select his or her preferred temperature.



Cutaway reveals precision design of 240D's four-cylinder diesel engine—a smooth four-cylinder.

Halogen fog lights are provided on every 240D.

Front seats employ several padded layers over a steel spring core for firm but supple body support.

The interior is well padded. At its widest point it is almost five feet wide. Every inch of glass is subtly tinted. Fillets of wood veneer are laid into portions of the instrument panel and central console, not cheap plastic but genuine wood. Standard 240D interior amenities include a quartz crystal chronometer, heated rear window glass, center rear seat armrest, and fitted carpeting front and rear.

The 240D's body achieves an 0.43 coefficient of aerodynamic drag, in part because it is so devoid of clutter. The five-coat system of primer and paint applied to it is as tough as it is lustrous. When you slip the key into the lock at the driver's door, one twist also locks all other doors, the trunk, and the fuel filler port with a barely audible sigh. A final flourish, this central vacuum locking system; a final efficiency of the efficient 240D Sedan.

300D

"The uninitiated may find its turbodiesel performance a smooth and sudden shock."

No diesel-powered automobile so far produced for sale to the American public can outperform the 300D Turbodiesel Sedan. But so well-rounded are its abilities that this signal advantage must take its place alongside numerous others. Set power comparisons momentarily aside. Few automobiles of any kind, when all vital criteria are added up and totaled, can outpoint the 300D Turbodiesel. It is more than a high-performance diesel. It is one of the world's most thoroughly civilized sedans.

That Mercedes-Benz engineers have so vividly transformed the once anemic diesel is an accomplishment not to be easily dismissed. Punch the throttle at 20, at 30, at 50 mph and you feel the car almost *shoot* forward in a turbine-smooth rush of engine response. You meanwhile feel almost nothing else—i.e., no clatter, no quake. A hand placed on the

TURBODIESEL

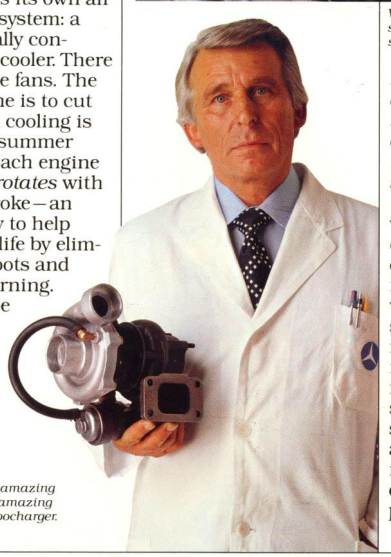
shift lever or the top of the dashboard picks up only the faintest trace of vibration.

The 300D Turbodiesel accelerates you into the mainstream of modern automotive performance, in short. The diesel engine was long scorned as a substitute for the gasoline engine, pressed into automotive service only by hard energy times. No more. This Turbodiesel engine is its peer.

It also brings you certain inborn diesel efficiencies. No carburetors to adjust, no spark plugs to replace. A tendency not to slurp fuel but to sip it. About three hours' worth of scheduled maintenance over its first 15,000 miles.

The oil that lubricates the engine has its own air conditioning system: a thermostatically controlled air/oil cooler. There are *two* engine fans. The sole task of one is to cut in when extra cooling is critical, as in summer traffic jams. Each engine valve slightly *rotates* with every valve stroke—an ingenious way to help prolong valve life by eliminating hot spots and premature burning.

There can be few sedans that feel as secure as the 300D Turbodiesel in the clutch. Its engine propels 3585 lbs. of technical enlightenment meant to instill driver confidence and trust.



Secret of the 300D's amazing performance is this amazing 17-lb. device, the turbocharger.

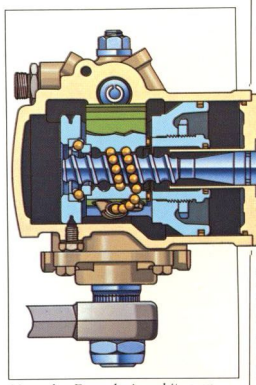
With folding central armrest retracted, space for two passengers becomes space for three.

The car grips the road with a tenacity reminiscent of a sports car. Yet it does not *bucket* over the road, nor does it bob and wallow, even on undulating surfaces. The primary reason for these blessings is the blessing of a fully independent suspension system with diagonal rear swing axle. Each shock absorber in this system incorporates an extra chamber filled with compressed nitrogen gas.

The rear axle's four constant-velocity couplings exemplify the Mercedes-Benz obsession with technical exactitude. No ready-made couplings met the desired standard. The engineers designed these vital components themselves and they are manufactured by Mercedes-Benz.

Automatic climate control system and AM/FM stereo radio with cassette player are standard.

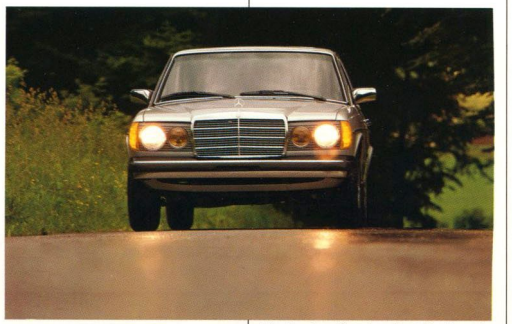
The power steering system is elaborately contrived *not* to feel like power steering. That is, it preserves crucial input from the front wheels to your fingertips. Steering sensation remains; only steering effort is reduced.



Mercedes-Benz designed its own recirculating-ball steering system. It is uncannily smooth.

The automatic transmission quadrant, mounted intelligently down by your right thigh, reads *P-R-N-D-S-L*. It has four and not three speeds for shifting flexibility. You can manually operate it if you prefer, but note that it will always outshift you automatically in terms of optimum efficiency.

The body shell cradles its occupants within a rigid framework of steel crossmembers, pillars and beams. It is more welded cage than shell. Most of the interior walls—and even the roof over your head—are padded. For noise reduction and of course for safety. The thirty pounds of undercoating on the car's underside help snub out road rumble while resisting corrosion. The 300D Turbodiesel is not stuffed with sound-deadening mats. It is too basically solid to need them.



The best-performing diesel in America. performing.

Both front seat backs recline. Both front seats adjust for height as well as fore and aft. Between the front seats is a plump armrest you can flip up and out of your way. Another armrest serves rear seat occupants. Automatic climate control; central vacuum locking of all doors, trunk and fuel filler port; electric window lifts; electronic cruise control; and AM/FM stereo radio with cassette player are standard.

300D's silvery forged light-alloy wheels dress up its appearance, while cutting unsprung weight.

The 300D Turbodiesel is a conscientiously designed automobile in the Mercedes-Benz manner. If you counted up its safety features—measures meant to help avoid trouble as well as those meant to help protect you and your passengers if trouble did occur—you would still be counting at 120. This sounds like a great many safety features. For some cars, perhaps; it is the standard number for Mercedes-Benz sedans.

300 TD

"There are station wagons, and then there is the Mercedes-Benz station wagon."

There is nothing cosmetic about the 300 TD Turbo-diesel Station Wagon. It is girded to perform workhorse duty as a mover and hauler of goods and/or people. Tick off the specialized prerequisites for a vehicle of this type and it satisfies each one. It also brings to station wagon driving some heretical ideas: what mere *wagon* ever aimed for such creature comfort, such riding smoothness even on un-smooth surfaces, such road-holding tenacity even in a fully laden state? What mere wagon ever doubled in brass as a turbo-diesel performance machine? This versatility, these and a raft of related benefits, define the only station wagon designed and engineered and built by Mercedes-Benz.

Cargo capacity totals 73.85 cubic feet when the interior is set up in maximum load-carrying trim. A doubly impressive figure when you see that the 300TD itself is such a sensibly sized

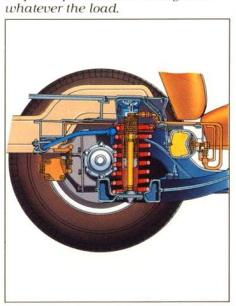
vehicle overall. (At just under 16 feet, for example, it is the same length as the 300D Turbodiesel Sedan.) You could actually stow an object nine and a half feet long inside, with the tailgate closed; the entire length of the interior on the passenger's side, from dashboard to rear window, converts to cargo space. The split rear seat and the front passenger seat are ingeniously articulated to fold down flat, creating any number of load-carrying configurations.

The Mercedes-Benz way with mechanical detail is evident everywhere. The hinges and hardware involved in all that folding and flipping are strong and rattle-resistant. The

Sections of split rear seat can be separately folded down to create instant cargo space.

physical exertion is minor. "By the way," adds *Road & Track*, "when restoring the rear seats to their normal upright position, you needn't worry about seat belts getting tangled under the seats. Daimler-Benz attaches the belt ends to rubber hangers which keep the belts in place."

Loading up the 300TD is easy work. The cargo floor is even with the rear bumper and less than two feet above the ground. The tailgate lifts up out of the way via a pair of gas-pressurized struts, discreetly buried in the roof rather than exposed where they might interfere with articles being loaded in or removed. The tailgate so tightly locks into the bodywork when closed that it helps stiffen the structure and even helps suppress noise.



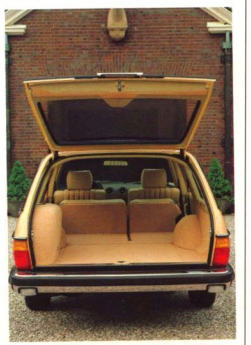
Hydropneumatic load-leveling device helps keep the 300TD riding level, whatever the load.

From the front seats forward, the 300TD looks and feels like any other Mercedes-Benz automobile.

The spare tire is set in an upright position on the left side of the cargo area, under a snap-on carpeted cover. The floor and entire cargo section are protected by a tough, tightly fitted carpet material. There is a "secret compartment" recessed under the cargo floor for stowing small valuables.

The 300TD is designed to carry five adults with all seats upright. A rear-ward-facing third seat is available as an extra-cost option. Another extra-cost convenience is a retractable partition net and luggage cover behind the rear seat.

From the driver's seat forward, the 300TD feels exactly like any Mercedes-Benz. Hardly a square inch is not carperted or padded or inlaid with genuine wood veneer. Driver and front passenger are nestled in generously large seats shaped and padded to complement the human anatomy. The automatic climate control system does just that: controls the interior climate, year round. Electric window lifts, an AM/FM stereo radio with cassette tape player (playing through four speakers), electronic cruise control and a central vacuum locking system are also standard built-ins.



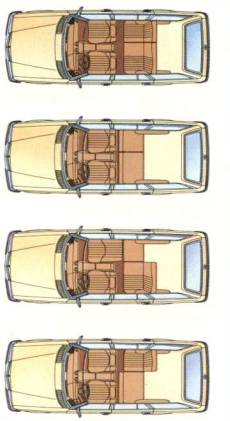
Tailgate lifts well up and out of the way, to facilitate easy loading and unloading of cargo.

A full cargo load will not find the 300TD sagging at the rear. A hydropneumatic load-leveling device is fitted to the rear suspension to compensate for extra weight and automatically keep you riding level.

The suspension system itself is fully independent in the Mercedes-Benz tradition. This lets each wheel function independently of the others and accounts in large part both for the 300TD's supple ride and its eager, stable handling. Incidentally, each wheel is forged of *light alloy* to pare down unsprung weight.

Power is plentiful. It is generated by the famous Mercedes-Benz three-liter, five-cylinder, *turbocharged* diesel engine, the performance king among all production diesels.

The high performance diesel that's also a wagon.



Multiple seat configurations add to the 300TD's versatility.

Linked to it is a four-speed *automatic* transmission, meant to give you the flexibility of a manual while absolving you of its tiresome shifting and clutching effort. The all-disc braking system provides 456 square inches of swept area. This is a station wagon and a station wagon should be strong. And there is strength aplenty built into the 300TD's all-welded unit structure.

You may buy the 300TD Turbodiesel for its merits as a station wagon. You will quickly find them inseparable from its merits as a Mercedes-Benz.

300 CD

"The idea of an elegant, two-door, diesel-powered coupe is no longer strange. It is in fact irresistible."

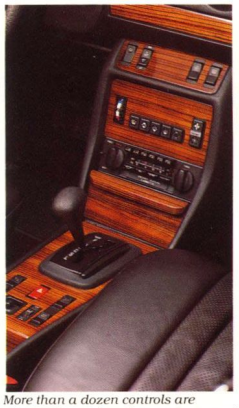
So transformed is the automotive world of today that one of its jewels is a two-door touring coupe designed to run without gasoline. You see it on the opposite page. It is the Mercedes-Benz 300 CD Turbodiesel Coupe. Who, a few short years ago, would have dared predict its rise—would have dared say that one of the more desirable sporting machines available to the American buyer in 1983 would be powered by a diesel engine?

The five-cylinder Mercedes-Benz Turbodiesel engine that powers the 300 CD is no commonplace diesel. It is, among its many distinctions, the most powerful diesel engine Mercedes-Benz has ever built into a production automobile. It makes this car inspiring to drive by infusing performance with real energy. The turbocharger is the hero, in effect supercharging each cylinder with so much sudden extra forced air that horse-power is

TURBO DIESEL

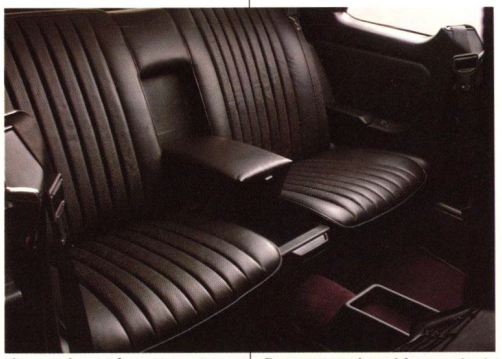
intensified by 45 percent. (To absorb the extra power, the engine is so extensively strengthened that more than half its moving parts differ from those in a five-cylinder, non-turbocharged Mercedes-Benz diesel.)

This may also be one of the quieter-running diesel engines of all time. Press the pedal: speed rises but the noise level remains soothingly low. The turbocharger unit—capable of running at 100,000 rpm—runs noiselessly. It extends the low-maintenance diesel image by needing no normal maintenance at all.



More than a dozen controls are handily located on the wood-trimmed central console.

The 300CD body shell is extensively handworked during assembly. No wonder the completed unit looks almost seamless. The floor is a reinforced steel platform. Concealed central posts help stiffen the car's midsection, to compensate for the absence of normal roof support pillars. The car may look lighter for being pillarless; do not confuse this with any loss of the usual Mercedes-Benz structural rigidity.



Doors open wide and front seatbacks fold forward for easy rear-seat entry and egress.

The engine and suspension extend from the body on separate subframes with cushioned mountings between, to help damp out noise and vibration. (The car seems all but incapable of transmitting rude jolts through to the occupants). The engine is cradled by its own shock absorbers. There is another shock absorber inserted into the steering system.

A wheelbase of just 106.7 inches makes the 300CD very nimble. Suspension is of course by the proven Mercedes-Benz fully independent system with diagonal pivot rear axle. Double-action hydraulic telescoping shock absorbers are mounted at all wheels. All four wheels are forged in light alloy.

The 300CD does not claim to be a sports car—it is too spacious. But the essence of sporting driving—driving as a pleasure in and of itself—is pungent.

Twin bucket seats are provided up front. There is a wide bench-type seat in the rear, equipped with a flat folding armrest. The trunk holds 12.6 cubic feet, should you travel heavily.

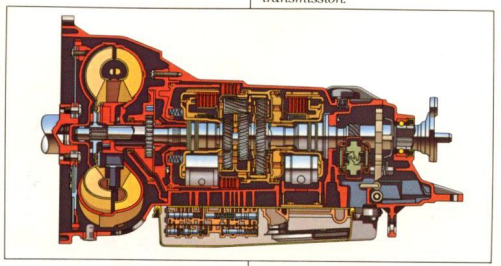
300CD Coupe looks lithe, taut and nimble because it is lithe, taut and nimble, by design.

A four-speed automatic invites *manual* control, because its action is so positive and because the shift lever is snug beside you, not up on the dash. Controls are light and positive, and hand controls so well organized that nine various driving functions are performed by one steering column stalk. Electronic cruise control is a godsend on prolonged highway trips.

Steering and brakes are servo-assisted but well short of the sponginess and numb feeling that have given so many power assists such a bad name among serious drivers. Where the interior is not carpeted or padded it is nicely finished with inserts of genuine zebrano wood. All four side windows are fully lowered electrically. There is an AM/FM stereo radio with cassette tape player, playing through four well positioned speakers. The interior climate is efficiently controlled by an automatic climate control system as simple to operate as it is effective, summer and winter. These and numerous other creature comforts help make the 300CD a peerless touring coupe. You may for the first time in your driving life *look forward* to the kind of marathon stints behind the wheel that lesser cars had long since taught you to dread.

Deeply contoured, bucket-type front seats complement the car's sporting flavor.

300CD bodywork is not just a handsome coupe form. It is also an aerodynamically efficient wedge.



Inside the 300CD Coupe's four-speed torque-converter automatic transmission.

300 SD

"One of the more progressive, more satisfying passenger cars of our age—diesel-powered or otherwise."

Having first invented the production diesel automobile and then developed it steadily for the past 47 years, Mercedes-Benz has perhaps inevitably created the ultimate diesel automobile. The 300 SD Turbodiesel Sedan merits this description by combining superior performance with unusual levels of creature comfort and—witness its superior coefficient of aerodynamic drag—certain technological advantages, not even shared by its diesel-powered companions in the Mercedes-Benz model line. The net of the ultimate diesel's many virtues is one of the more satisfying and progressive automobile designs of the Eighties, diesel-powered or otherwise.

There is a presidential sense of physical well-being aboard the 300 SD Turbodiesel Sedan. The seats fore and aft feel very thick, very supple. You can move about in them with headroom, shoulder room, hiproom and legroom to

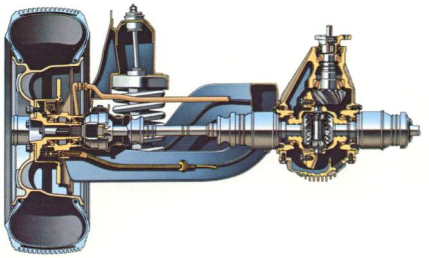
TURBO DIESEL

spare. The appointments and conveniences expected of an automobile of the senior rank are there, from comprehensive automatic climate control to rear reading lamps to an amazing little device on each front door panel that electrically adjusts the position (eight ways) of each front seat. The roof above you is padded and so are the doors. All wood trim is real wood.

The way the car moves does not break the mood. You are superbly well insulated from noise and vibration. The car refuses to roll or pitch severely even when provoked by hard cornering or roller-coaster roads. Driving the 300 SD, you feel almost a part of it. Its crisp, quick, light precision of aim and maneuver belie its 1¾ tons.

It feels as calm at one speed as at another. You begin to wonder what it would take to discombobulate such poise.

The 300 SD's performance and worth rest entirely on a foundation of technological excellence. A commonplace technical idea is hard if not impossible to find. (Look at the glovebox door lock: it is an *anti-inertial* mechanism, to help hold the door fast in an impact.



Uncommon handling stability derives from this uncommonly sophisticated diagonal pivot rear axle.

The 300 SD is not so much styled as shaped into an aerodynamic capsule, formed of steel and glass.

Among many 300 SD accoutrements are twin reading lamps, recessed into the rear quarters.

This seat-shaped control electrically adjusts your seat position; just touch its corresponding part.

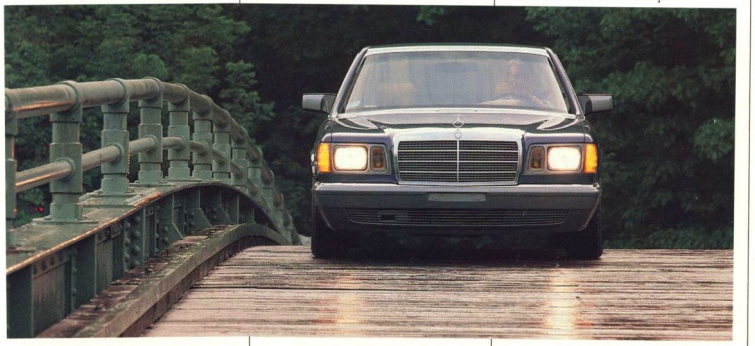
Look at the windscreen washer nozzles out on the hood: not only are they *heated* to resist icing-up in winter; each sprays both sides of the windscreen—so that if one somehow failed, visibility could still be preserved.)

The five-cylinder turbocharged diesel engine under the hood is powerful but stringently frugal with fuel. The big, fade-resistant four-wheel disc brakes could stop a far heavier vehicle. The automatic shift quadrant is marked *P-R-N-D-3-2:* you control a hydraulically actuated *four*-speed automatic transmission. The flexibility of a manual is ingeniously blended with the ease of automated shifting. You can override the automatic mode and manually select gears whenever you choose. Reassuring on ice, steep hills and the like.

An entrant's-eye view of one of the more liveable rear seating areas among modern sedans.

Advanced technology cannot be put together with backward techniques. The 300 SD is thus built almost like a precision instrument. Every major tolerance is extremely fine. The body seems to almost have been cast in one piece. (It has actually been welded at 5,350 individual points.)

A frontal aerodynamic spoiler is incorporated into the bodywork of the 300 SD beneath the bumper.



Tasteful wood accents in 300 SD interior are carefully crafted from genuine wood.

This car is one of the more aerodynamic sedans currently sold in America. It not only cheats but *manages* the wind, from nose to tail, as it passes over and around the car. Item: at the tail, the exhaust pipe is so positioned in the airstream that its fumes are aerodynamically sucked away from the moving car. Sophisticated ventilation engineering helps maintain air pressure inside the car at a constant level.

There are 120 safety features. Even the star on the hood is one; it is spring-loaded to yield to impacts. Both outside mirrors will yield to impacts from fore *and* aft.

These are some examples of why Mercedes-Benz does not blush about calling the 300 SD Turbodiesel the ultimate diesel automobile.

380 SEL

"There can be little argument that this is the best Mercedes-Benz sedan in 97 years."

There is always one sedan in the Mercedes-Benz model hierarchy that serves as an engineering flagship—a car of absolutes, courting comparison with the world's best. It is not designed with second place in mind. The current entry, shown at left, is the 380 SEL Sedan.

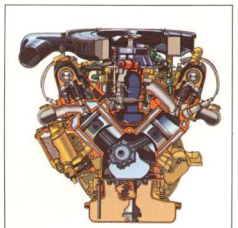
The 380 SEL commends itself not by inert luxury—more padding, more pomp, more sheer size and sheer weight—but by its high automotive technology, skillfully applied.

Its volume of interior space is magnanimous: one hundred cubic feet of it, affording such luxuries as three feet of headroom *and* three feet of legroom in the rear, and almost limousine comfort for five overall. Yet the bodywork enclosing all this living space renders the 380 SEL among the most aerodynamically efficient of all sedans of any size, sold in America. More aerodynamically efficient, indeed, than many exotic coupes and

sports cars. A 17 foot, four-door, 3780 lb. aerodynamic champion: high technology, skillfully applied.

So aerodynamically fine-tuned is the 380 SEL that its door handles lie almost flush with its skin and window glass, flush with its framing. Wind noise is barely detectable at cruising speed. Running noise is scarcely more audible: the engine, a lusty, 3.8 liter V-8, is mechanically next to mute at idle and only a hushed presence underway. (A second firewall muffles its exertions still further.) This is the most nearly silent-running Mercedes-Benz sedan yet.

There is a *sense of security* within the 380 SEL that the word "comfortable" fails to describe. It does exemplify



Light-alloy 3.8 liter engine is the most efficient V-8 in Mercedes-Benz history.

what "luxury" means in the Mercedes-Benz vocabulary. Your passengers may be barely aware, for

No extraneous chrome decoration is permitted to sully the 380 SEL's crisp aerodynamic lines.

instance, that the 380 SEL is making sports-car time

Rear seating area affords almost three feet of headroom and three feet of legroom.

over zig-zag roads.

This unique synthesis of ride and handling poise is a direct function of technological mastery. Thus the elaborate fully independent suspension system. Thus the acutely accurate steering. Thus the heroically fade-resistant four-wheel disc brakes. No luxury sedan extant surpasses the 380 SEL in technological sophistication. Therein may lie the vital difference.

The body is itself a technological stride forward. It is compounded of steel, alloys, and high-strength *low-alloy* steels, precision-welded into a unitized structure as notable for its weight-saving properties as for its incredible strength. Roof pillars and the front roof section combine to form an integrated unit that helps gird against roll-over impacts. Pillars, door frames, doors, hinges and locks are engineered with impacts in mind. (Just one Mercedes-Benz door lock is so strong that it can actually support the entire weight of the car.) The fuel tank is sheltered between the rear wheels above the rear axle and shielded by steel bulkheads.

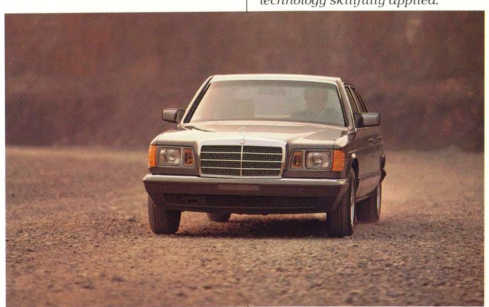
High-strength, non-metallic composite materials do not save money in production but do save weight. The 380 SEL—as has the aerospace industry—seizes on such advanced materials technology. It factors out to a more efficient automobile.

Mercedes-Benz is presumptuous enough to insist that ergonomic experts know more about human comfort than stylists and decorators. This is another way that the 380 SEL departs from luxury-car custom.

Within each front seat, under several layers of

Natural leather upholstery is not an extra-cost 380 SEL item.

The 380 SEL Sedan: high automotive technology skillfully applied.



padding, is a steel spring core. The weight of your body is *firmly* supported. (The engineers regard pillowy seats as biomechanical idiocy: you cannot easily shift position in them, and constant tiny adjustments of posture are what keep the body feeling fresh in prolonged sitting.) The route may be different. The goal is the same: maximum physical ease.

You can vary your seat position eight ways in the front and two in the rear, electrically. The front controls are on the adjacent door panel. It is a miniature seat. Simply press its corresponding part—and *your* seat correspondingly moves.

An extremely comprehensive automatic climate control system was developed by Mercedes-Benz to meet Mercedes-Benz standards. Not only are there outlets behind the minutely perforated front door panels, but a special console faces the rear seat occupants. Its controls let them direct ventilation or cooled air as they prefer.

Almost no conceivable amenity has been omitted from the standard equipment list. The floor is beautifully carpeted. Hand-finished burled walnut abounds.

Such a synthesis of excitement, comfort and common sense could have only derived from Mercedes-Benz, and only in the technological world of the Eighties. An automobile, worthy of its flagship status in the line.

This ventilation console is placed in the cabin expressly to serve rear seat passengers.

380 SL

"These stern Mercedes-Benz engineering standards do not mute its sporting pleasures... they intensify them."

The 380 SL is part roadster, part sports car, part touring coupe. But it is dominantly a Mercedes-Benz.

This leavens its sporting nature with qualities seldom stressed in two-passenger, top-down machines. No car is allowed out into the world from Stuttgart that does not measure up to Mercedes-Benz standards of strength, of comfort, of durability and of safety. No exception was made for the 380 SL. You will discover that the pleasures you anticipated from this most sybaritic of Mercedes-Benz models are in no way dulled by the strictures of the engineers. Indeed, they make the 380 SL a more secure, more satisfying automobile. Your pleasure is intensified.

The 380 SL is mounted on a very short wheelbase of just eight feet. Front and rear track reaches to almost five feet. These are the dimensions of an extremely agile car. This is borne out by its 34.4 foot turning diameter and posi-

tively dramatized by flinging it through consecutive tight curves on a very narrow road.

Such acrobatics are unlikely to alarm you or your passenger. The 380 SL's center of gravity is low, helping force the car's mass down nearer the road and lending the tires bite. Body sway is minimal, checked by front and rear anti-sway bars. Forged light-alloy wheels help reduce unsprung weight. Each wheel is free to individually counter road irregularities, independently suspended at its axle.

Starting and braking torque compensation are built into this suspension. This means less tail-squatting on hard takeoff,

Convertible top folds quickly and easily and stows in its own hidden locker.

and less nose-diving in hard stops.

The 380 SL is propelled by a 3.8 liter V-8 engine of not modern but ultra-modern design. Chrome-plated light alloy pistons move within silicon-impregnated cylinders within a die-cast light alloy block. The net: a strikingly lighter V-8 and related efficiencies of weight. Thermal efficiency equals that of heavy cast-iron engines. Reciprocating masses are so optimally balanced that running noise is quelled to a proverbial murmur. Mercedes-Benz pioneered fuel injection in passenger cars. The 380 SL's is a continuous-flow *mechanical* fuel injection system, three generations down the pike in development.

The 380 SL can be utilized as a hard-top coupe, a convertible coupe, or an open roadster.

You will love this engine as much for its efficiency as for its poke. It is a V-8 for the Eighties, in brief.

Performance efficiency has always been dear to the Mercedes-Benz engineers' hearts. One way to foster it is by paring excess weight wherever practical. Thus, for instance, the hood ahead of you is not steel but aluminum.

Another ally is aerodynamic body design. The 380 SL is meant to create minimal friction as it cuts through the airstream—and in so doing to create minimal wind turbulence and noise.

Body detailing meets Mercedes-Benz enthusiasts' expectations. The paint job alone is a conversation piece. The tail-pipe is thoughtfully angled downwards, to help prevent soiling of the body-work by exhaust effluvia over time. The only side trim is a thin chrome-edged rubber insert at the body's widest point, for self defense in parking lots.

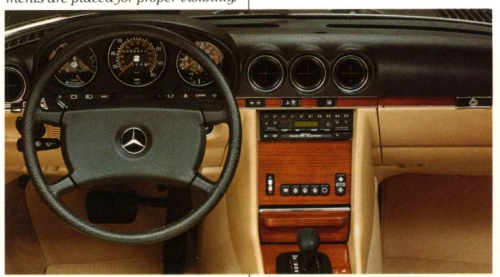
Your 380 SL is in actuality three 380 SL's: the open roadster, the convertible coupe, and the hardtop grand touring closed coupe. The soft top stows neatly and quickly in its own locker and is a one-person job to operate. The metal hardtop fits as snugly in place as if custom-made (perhaps because it is). It can be removed or installed in minutes. Its glass rear window is, incidentally, heated.

Forged light alloy wheels are standard.

The car's very wide doors are so evenly balanced that they open and shut easily. The interior is roomy, padded, sumptuously relaxing. There is plentiful space behind the twin bucket seats and 6.6 cubic feet of luggage space in the trunk. Carpeting is fitted in the foot-wells and on the engine tunnel. The automatic climate control system, the cruise control device, and the programmable AM/FM stereo radio with cassette player are all electronic. Even the *speedometer* is electronically operated, to function more quietly. Window lifts are also electric.

One of the world's most desirable cockpits is perhaps also one of the most purely functional.

Large, legible white-on-black instruments are placed for proper visibility.



The tunnel-mounted shift lever connects to a superb four-speed automatic transmission. The non-slip steering wheel operates a superbly *precise* recirculating-ball steering system. The brake pedal activates a twin-circuit, servo-assisted system of four-wheel disc brakes. The front discs are internally ventilated and use thicker pads. The 380 SL exemplifies the old Mercedes-Benz credo that its brakes must be the most powerful part of the car.

380 SEC

"Mercedes-Benz engineering is not only respected; it is held in awe. This formidable machine shows precisely why."

The 380 SEC compresses the exotic technology of the 380 SEL Sedan into a two-door, four-passenger *gran tourismo* coupe. An automobile of equally great talents but strikingly different personality results.

The 380 SEC is clearly the more sporting car, for example. Its sleek coupe profile only partly accounts for this. The sedan-to-coupe transformation induced a major transformation in *dimensions* as well. Nine inches shorter, its 112.2 inch wheelbase almost a foot more close-coupled than the Sedan's, the 380 SEC is an inherently more agile car—happier on tricky roads, nimbler, lighter-feeling. The sporting driver's pleasures are thus intensified.

That two-door body configuration with its absence of center pillars, the cabin's more intimate proportions—these further enhance the sporting atmosphere of the 380 SEC Coupe.

The genius of this aerodynamic feat most fully reveals itself, oddly enough, *inside* the car. You and your passengers are not scrunched down, tucked in, cramped in any way. Not even headroom is sacrificed for aerodynamic glory. (Superb aerodynamic form actually helps *create* a huge trunk; the car is a wedge, much higher at the the tail than at the nose, allowing 14.9 cubic feet of luggage space behind you.)

You can even hear the 380 SEC's aerodynamic efficiency—or rather you *cannot* hear it, because it so mutes wind turbulence around the windows. A noise phobia seems to have driven the engineers. They double-sealed the doors and built in a second firewall between cabin and engine, as two examples. They had already conceived one of

As impressive as the 380 SEC's clean appearance is its clean 0.35 drag coefficient.

the quietest-running V-8 engines Mercedes-Benz has yet produced. Even at exalted rates of speed, the

Four-speed automatic transmission can be shifted manually—and with satisfying precision.

interior of the 380 SEC feels not only remarkably quiet but also remarkably still.

The body itself may or may not be the handsomest of all current Mercedes-Benz models, as alleged by many of the automotive press. That judgment is purely subjective. Entirely objective is this body's claim to aerodynamic genius. It knifes through the airstream. Its 0.35 coefficient of aerodynamic drag makes the 380 SEC one of the most aerodynamically advanced designs in production today.

Each passenger occupies his or her own individual bucket-type seat, front and rear. Six armrests serve four people. Those seated in back can adjust the controls of a separate ventilation and air conditioning console

Ingenious shields protect door handles from mud and rain.

provided just for them. The front seat backs are vacuum-locked and automatically release when the driver's door is opened, to ease rear entry and egress.

Each front seat electrically adjusts eight ways, via a door-mounted, *seat*-shaped device so ingenious that you may find yourself changing position often, just for the pleasure of using it.

Driver and front seat passenger are served up their seat belts by a safety minded electric extender. You are left no excuse for not buckling up.

Set into a portion of the burled walnut center

A coupe with real trunk space: a full 14.9 cu. ft.

console are eight push-buttons and a thumb-wheel. They operate the automatic climate control system that Mercedes-Benz and advanced electronics have devised for your year-round comfort. It renders climatic discomfort virtually impossible. It is also quick, quiet, unobtrusive.

Electronic cruise control, a central locking system and AM/FM stereo cassette player with four speakers are some of the many standard amenities.

A 7000-rpm tachometer (also standard) suggests, correctly, that the 3.8 liter light-alloy V-8 up front is responsive. Mated to it is one of the crispest-shifting automatic gearboxes ever placed in a production automobile, a torque converter device with four speeds. You can leave it in *D* and it will efficiently do your shifting for you. You can also work it by hand, sports car-style. Not an affectation: the hefty-feeling lever is

The 380 SEC's driving excitement is tempered by a tasteful, restful interior atmosphere.

beside you on the transmission tunnel and has as satisfyingly positive a movement as some manuals.

Outstanding handling exacts no toll on the 380 SEC's ride. You can feel the road passing by underneath you, but its bumps and jolts only mildly intrude. Punishing back-country roads expose weaknesses in some cars. They tend to highlight the 380 SEC's sense

One of the few coupes today that can make long trips truly pleasurable trips.

of surefootedness and solidity.

The 380 SEC Coupe ranks as a contender for the title of the world's single most desirable automobile. These pages perhaps prove that it does so not on looks or exclusivity or novelty, but as its creators intended: on the masterfulness of its performance.

Both rear passengers are provided with individual bucket-type seats.

TESTING

Some new cars are deemed ready after two years' development. A Mercedes-Benz is ready only after seven.

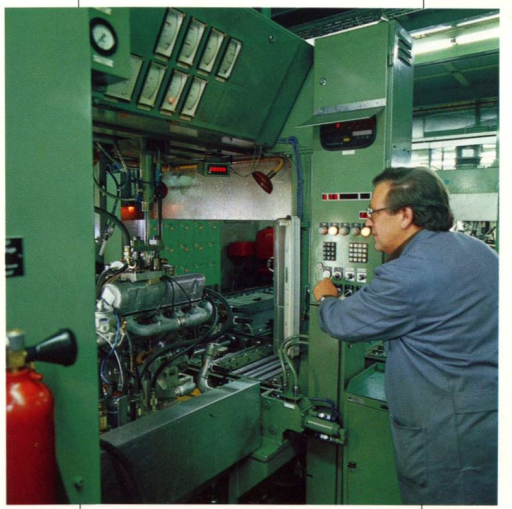
All-new Mercedes-Benz models are not announced annually. Such introductions traditionally come at intervals of about seven years. One reason is the Mercedes-Benz insistence that any new model represent a significant improvement over its predecessor, and the consequent intensive research and development required to achieve such gains.

Thus, virtually no indignity can befall a Mercedes-Benz in the course of its later life that the Test Department at Stuttgart-Untertuerkheim has not already inflicted upon it—repeatedly—within the clinical confines of the laboratory or the test track, long before its public debut.

Individual components, from brake calipers to door hinges to the springs in the seats, have already undergone their individual punishments before gaining approval for installation in production automobiles.

All-new Mercedes-Benz models are few and far between. This exhaustive testing system stands as a key reason why. Ensuring that a new Mercedes-Benz is a true Mercedes-Benz, down to its door sills, involves a process simply too time-consuming, too patient, too painstaking, for all-new models to be rolled out annually like some line of haute couture clothing.

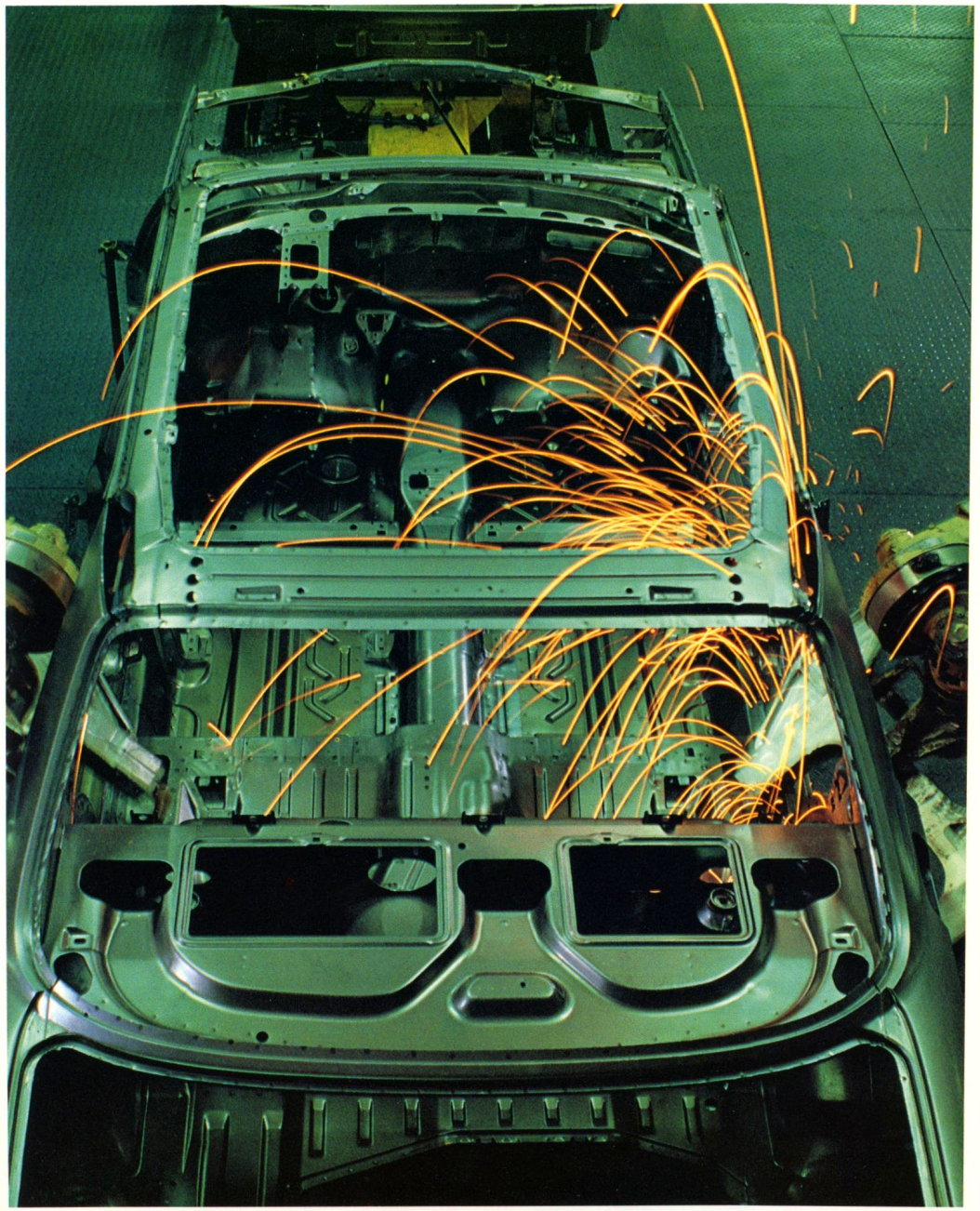
What other makers seem content to do in one or two years of development, the engineers of Mercedes-Benz prefer to do in seven. Seven years of cold-room tests, noise-room tests, crash tests. Prototype driving tests that can span the globe from Scandinavia in January to Death Valley in July and total three, four, five million miles of priceless preproduction experience. Suspension tests on the notorious "highwall" at the Untertuerkheim test track, where centrifugal loadings magnify the weight of a speeding car by two and a half times—forcing a crushing extra load on tires and suspension. Stability tests that send a car past a battery of giant fans, generating tornado like side winds in sudden gusts. Skid tests, where drivers hurl the car around and around a circular course paved with various slippery surfaces, while a water cannon showers the course to make them that much slipperier.



Each newly minted engine is electronically tested 24 ways.

The result of all this testing is not a perfect automobile; the goal of perfection is constant at Mercedes-Benz, but only a fool would announce its achievement—and fools these engineers are not.

Suffice it to say that Mercedes-Benz automobiles rank among the most thoroughly tested and proven machines of any kind, and that their reputation for excellence may owe as much to this fact as to their performance and design.

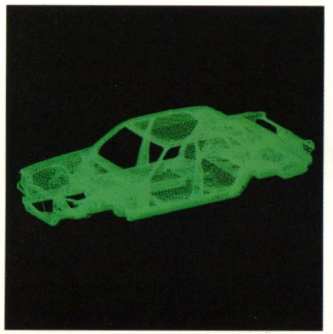


STRUCTURE

Small wonder that this body can absorb such brutal punishment; it is precision-welded at more than 4,900 points.

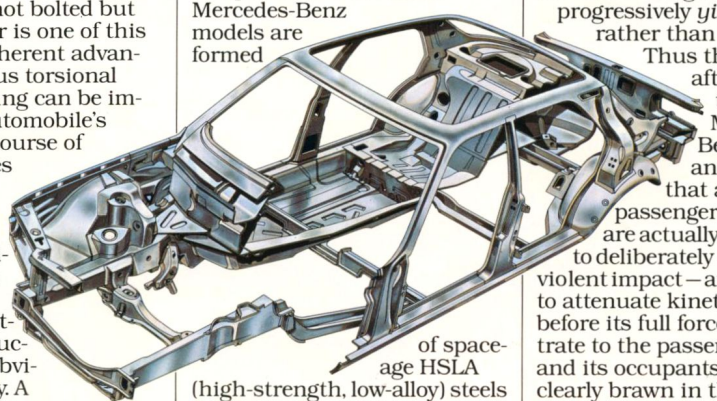
The term "chassis" as applied to Mercedes-Benz automobiles today is outmoded. The engineers long ago detemined that greater safety and structural rigidity—and a radical saving in precious weight—could be gained by abandoning the customary practice of bolting the body onto a separate chassis, and instead *combining* the two elements in a single entity. (This is commonly known as a unit or monocoque body; it is in fact a series of steel boxes welded together, and although each such box constitutes a monocoque structure, engineering parlance for the resulting whole is *stressed skin* construction.)

That it is not bolted but welded together is one of this body's great inherent advantages. Enormous torsional strain and flexing can be imposed on an automobile's body over the course of its life—stresses powerful enough to gradually loosen nut-and-bolt fastenings and prompt shimmy and rattling in the structure. Welding obviates such decay. A Mercedes-Benz body is welded together at more than 4,900 precise points.



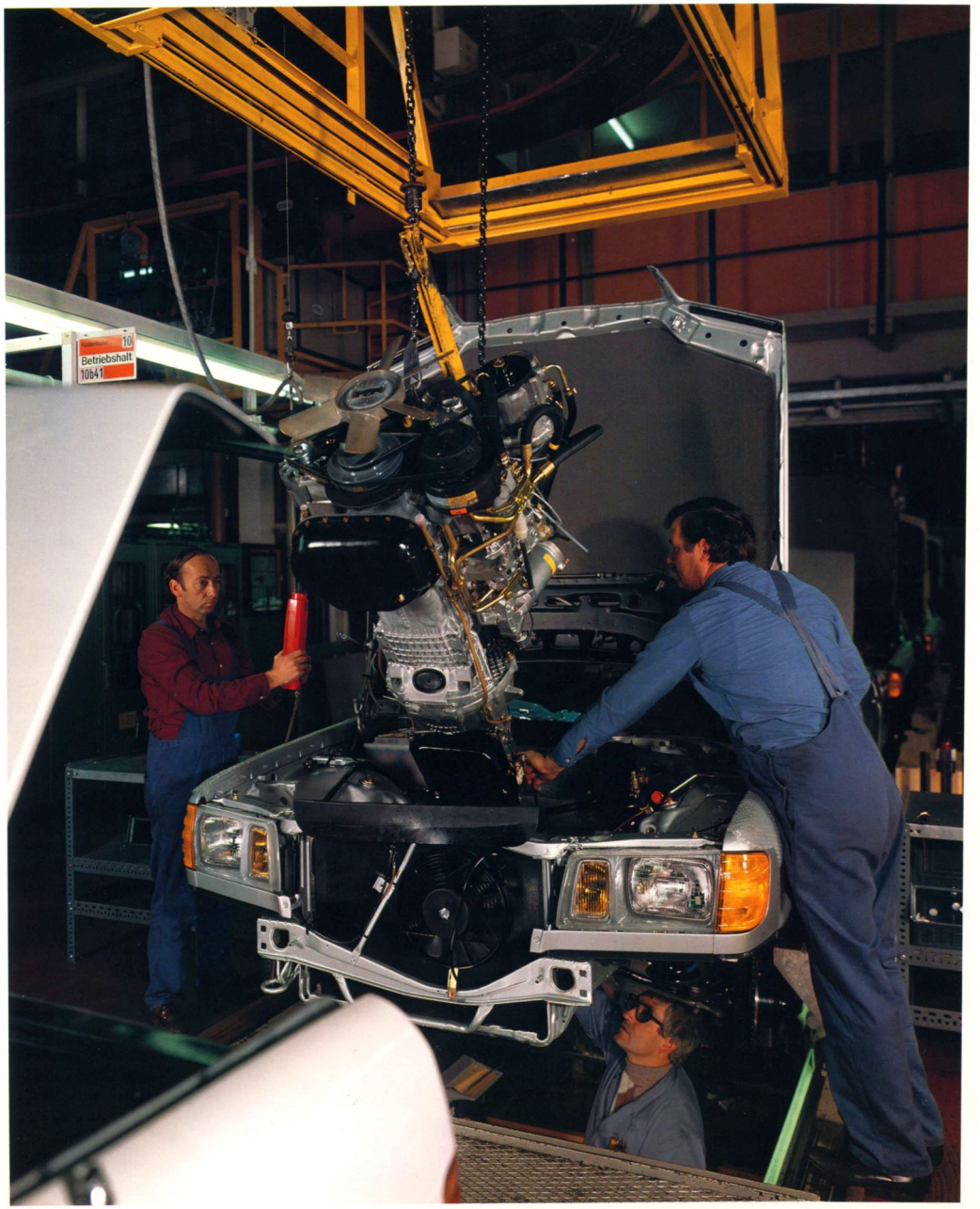
Computer-generated view of unit body. Below, an actual view of unit body.

Common steel is not the only metal employed in fabrication of this structure. The floor panel and many other components of the latest Mercedes-Benz models are formed of space-age HSLA (high-strength, low-alloy) steels—both lighter and stronger. Aluminum hoods and trunk lids save further pounds.



The design and construction of the car's basic structure incorporates many basic Mercedes-Benz safety principles. One is protective strength—the fortification of the passenger compartment to help it withstand violent impacts while deforming as little as possible. Roof pillars should not easily buckle. Doors should resist being easily flung open by the force of a direct side impact. The more rigid and impact-resistant its major supporting members, the better the overall structure can provide that protective strength. But Mercedes-Benz engineers long ago understood the safety advantages in a structure designed in part to progressively *yield* to force, rather than resisting it.

Thus the fore and aft body sections of a Mercedes-Benz, ahead of and behind that all-important passenger compartment, are actually programmed to deliberately collapse in a violent impact—and in so doing, to attenuate kinetic energy before its full force can penetrate to the passenger section and its occupants. There is clearly brawn in the structure of a Mercedes-Benz. But this ingenious principle shows that there are also brains.



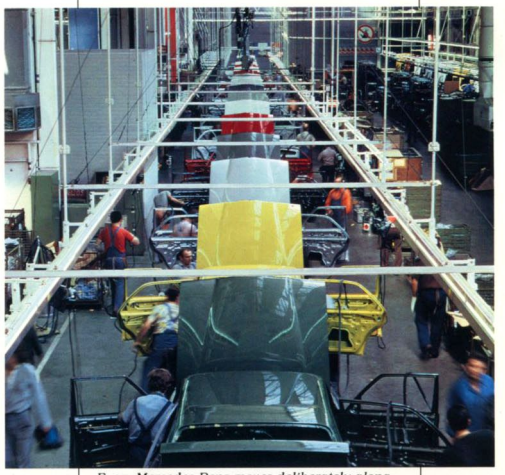
ASSEMBLY

Robot and craftsman, side by side; task by task, the method used is whatever brings superior results.

Computer-directed robots, welding body panels together with rhythmic, inhuman precision. Smock-coated craftsmen, patiently applying coat upon coat of varnish to strips of wood veneer. That such methods co-exist under one factory roof might seem a contradiction. It is not. Mercedes-Benz has neither embraced automation wholesale as a modern industrial panacea, nor clung to the methods of the past, past their time. Task by individual task, the assembling of its automobiles is simply performed in whatever manner helps ensure the best end results.

The human factor remains crucial. Practiced hands still assemble every bucket seat. Gimlet eyes still sight along each freshly painted body in search of a ripple or a blemish. The sanding and sealing of body joints is not a matter of machine work but hand workmanship. Automated, articulated, multi-million-dollar mechanical processes are key elements in the assembly of every new Mercedes-Benz; but it is the personal judgment of an inspector that is decisive, every step of the way.

On one major production line, automobiles are inched along not on old-fashioned conveyor belts but in huge revolving cradles, which turn the car to meet the worker instead of forcing him to awkwardly bend or stoop to his task.

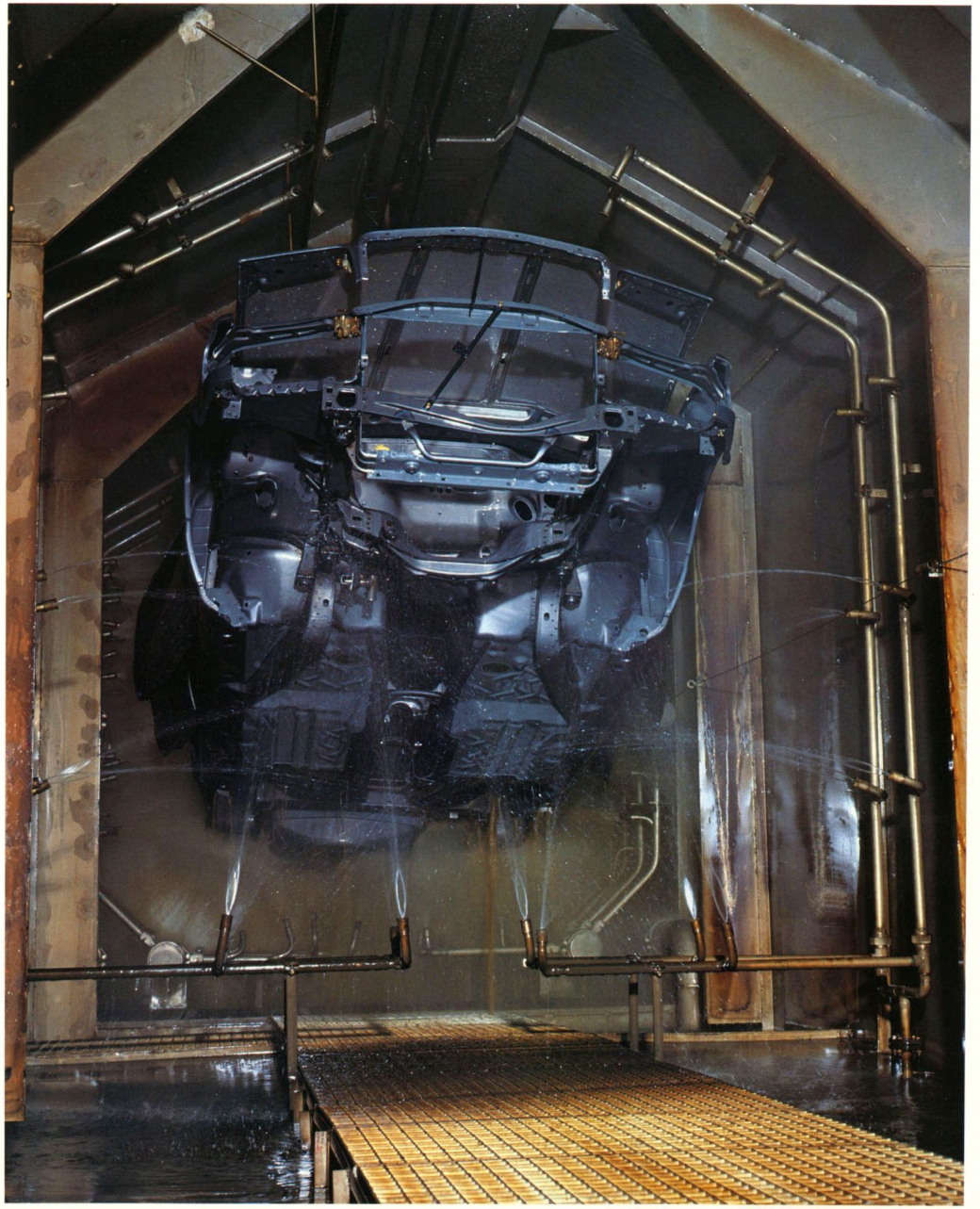


Every Mercedes-Benz moves deliberately along one of the world's most unhurried production lines.

Mercedes-Benz maintains its own woodworking shop, where amid the aroma of sawdust and veneer, the delicate fillets of interior wood trim are carefully prepared prior to fitting in the car. Mercedes-Benz seats are sewn and fitted in the company's own upholstery shop.

The automobile's adherence to Mercedes-Benz standards of precision is almost constantly monitored and double-checked along the methodical route to completion. A special gauge was designed, specifically to measure the alignment of door panels with the body. Another device audits body tolerances—comparing them against a master specifications sheet in search of the minutest deviations.

Not only random engines but *every* engine is subjected to a cycle of 24 individual tests before being pronounced fit for installation in an automobile. Each engine block, plus hundreds of individual components, have already been microscopically measured (and in the case of light alloy V-8 engines, individually X-rayed). Vital suspension and drivetrain and rear axle components are tightened by torque wrench—which promptly spits out a tiny blob of bright-colored paint, signaling to the next inspector that the fitting tolerance is correct.



FINISH

That finish is more than glossy, mirror-clear paintwork. It is a nine-step defense against corrosion.

The body of every Mercedes-Benz has been meticulously finished prior to the first drop of paint—seams and joints so skillfully brazed and leaded that the structure appears to be almost a single, seamless steel carapace. The smoother and more uniform the metal, the smoother and more uniform the paint.

At Mercedes-Benz, robots have not replaced the care and contribution of trained craftsmen.

The paint itself is two coats deep, applied over three earlier primer coats. Zinc phosphate bonderizing degreases the body, improves paint adhesion and helps armor the body against corrosion. The next two primer coats are electrostatically applied: paint is atomized in a high-tension field of 50,000 to 70,000 volts before being deposited on the body. A plasticized primer is then sprayed over the lower portion of the body to protect the paintwork against flying gravel and other chipping hazards. The car is virtually *baked* as it is painted. This electrically timed heat treatment is designed to harden the surface. Paint booths are pressure-ventilated, to eliminate atmospheric dust.

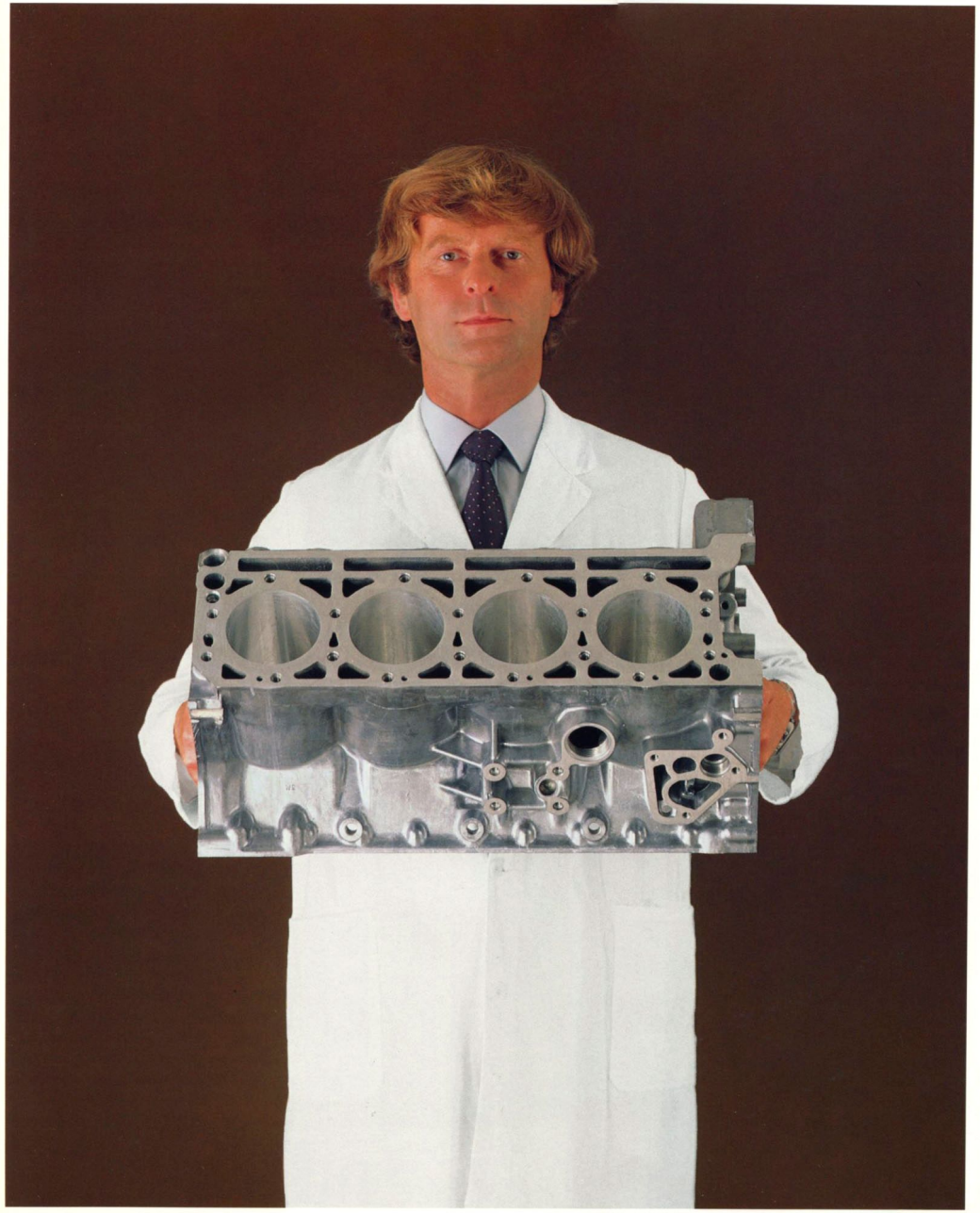
An inspector affixes the seal signifying that a new Mercedes-Benz is indeed a Mercedes-Benz.

What will ultimately be fillets of glossy wood veneer, taking form in the factory's own woodworking shop.

Lavished on the car's underbelly are over 30 pounds of plasticized vinyl undercoating—corrosion protection that also helps deaden road noise. A plasticized vinyl coating is also hand-applied to all welded interior and exterior seams. All hollow body sections are sprayed with an ingenious adhesive wax.

A car's finish may be the most visible proof of its quality. The extraordinary pains that Mercedes-Benz takes in the finish of every new automobile is a signal that nothing has changed: a Mercedes-Benz is still a Mercedes-Benz.

Mercedes-Benz maintains one strict standard of fit and finish, regardless of model designation.



POWER

Efficient engine performance has been an essential criterion since there has been a Mercedes-Benz.

The man in the picture at left is holding in his arms the entire cylinder block of a Mercedes-Benz V-8 engine.

If it were almost any other V-8 engine block, he would probably be staggering under the load—had he been able to lift it up in the first place. But this is no ordinary engine block. It is cast not in iron but in weight-saving *light alloy.* And it symbolizes the way advanced technology helps Mercedes-Benz powerplants reconcile the unchanging demand for performance with today'snewdemands for efficiency.

The technological background of this light-alloy V-8 is not only advanced, but elegant. It is painstakingly cast in a single piece, under low pressure, in the costly "closed-deck" process. The process is esoteric. The benefits are simple. Among them: a light-alloy engine as resistant to heat, to vibration, to wear as conventional engines. Each of its cylinders is cast with a glass-hard coating of silicon crystals—so hard, in fact, that they can be properly machined only by tools tipped with diamonds.

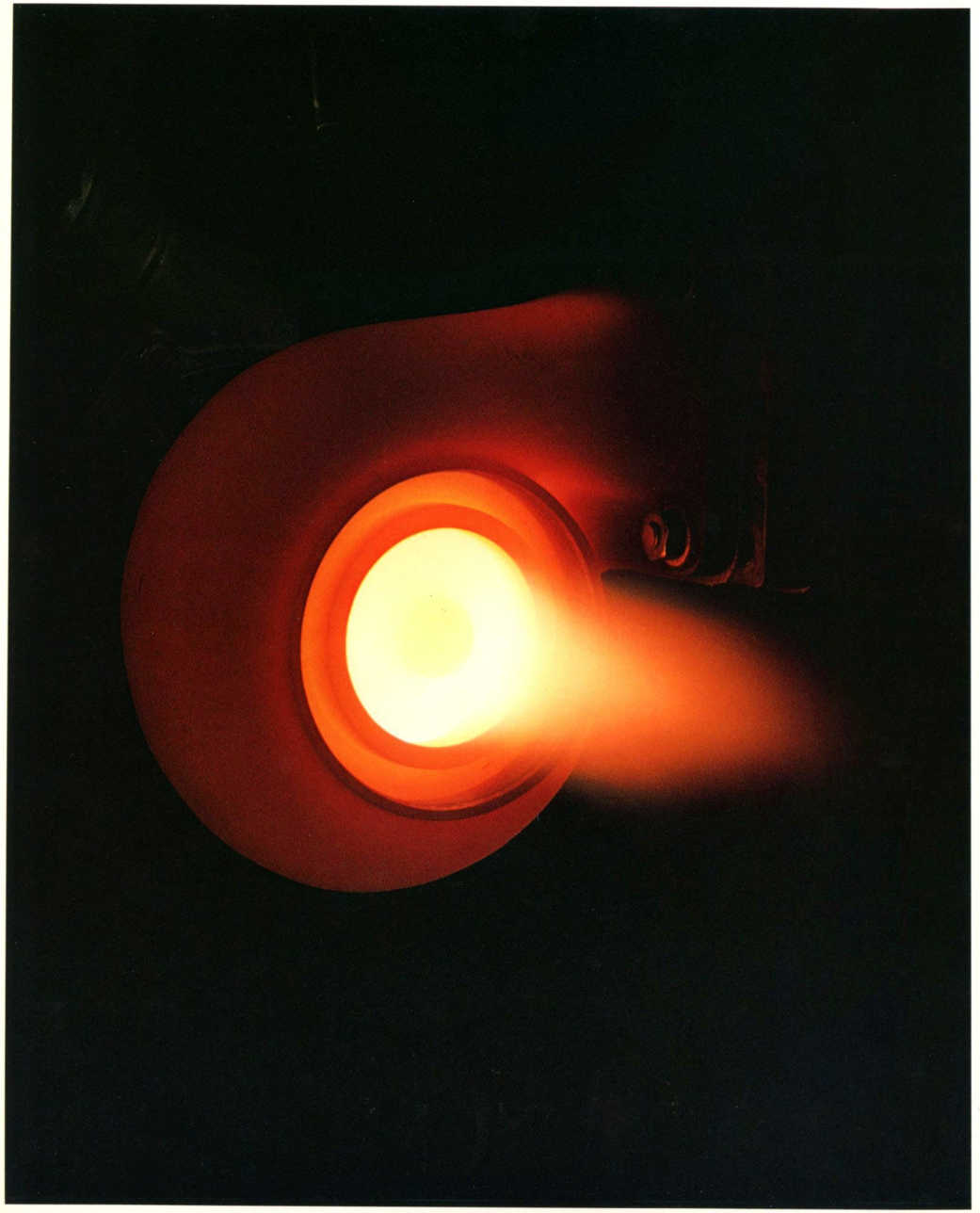
Displacing a cylinder capacity of 3.8 liters, this turbine-smooth V-8 superseded an engine of almost 25 percent larger capacity in 1981—bringing better fuel consumption with it, but *no* appreciable loss in performance. Technological advance, indeed.

Automatic transmission's hydraulically actuated "brain" is this labyrinthian control plate.

So extraordinary are the standards of performance imposed on its engines by Mercedes-Benz itself that commonplace engineering solutions and production shortcuts are unacceptable compromises. At a time when it seems every manufacturer has suddenly discovered the wonder of fuel injection as an advance over carburetors, for example, it might be noted that Mercedes-Benz—which pioneered fuel injection on production passenger cars over two decades earlier—has by now moved on to a sophisticated *third* generation of development. Every V-8 engine utilizes a C.I.S., or continuous injection system: more incredibly efficient than ever, yet more mechanically simple than ever. Engine valve operation is made more efficient via overhead camshafts in place of pushrods—costlier to build, but worth it in the engineers' opinion.

Engine power must then be transmitted to the car's rear driving wheels with the minimum possible slippage and wasted energy en route. The four-speed Mercedes-Benz automatic transmission makes a case in point. This robot gearbox cannot only shift quicker and more efficiently than the canniest human hand, but it wastes almost no engine power in the process.

It is no small part of the world-wide Mercedes-Benz legend that its engines enjoy such esteem; for their performance, their smoothness, their stamina—and their efficiency.



TURBODIESELS

Quite simply, the most powerful diesel engine yet to be placed in a production automobile.

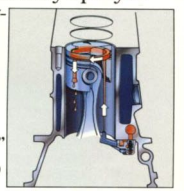
Mercedes-Benz buyers are by definition among the most demanding and most critical automobile judges in America today. And more of them have lately chosen models powered by the five-cylinder turbodiesel than by any other Mercedes-Benz engine. If this precedent-shattering powerplant required any further endorsement, its wide acceptance by Mercedes-Benz buyers would surely suffice.

The turbodiesel's value in today's world is twofold. It generates power comparable to gasoline engines of similar size; it meanwhile retains the frugal fuel appetite of a diesel.

To the three-liter, five-cylinder Mercedes-Benz diesel engine is mated a turbocharging device. It weighs just 17 lbs. but generates *45 percent* more horsepower—almost literally from thin air. A turbine wheel placed in the engine's exhaust stream extracts energy otherwise wasted out the tailpipe, using it to drive a compressor turbine in the intake tract. Its blades, spinning at approximately 100,000 rpm, pack the cylinders with such an extra torrent of air that combustion, and horsepower, are radically increased.

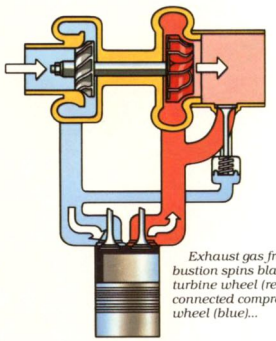
Five-cylinder diesel engine: another Mercedes-Benz first.

That five-cylinder diesel engine is virtually re-engineered for turbodiesel performance. One ingenious modification: a steady jet of cooling oil, precisely sprayed into each moving piston from nozzles in the base of the engine block.

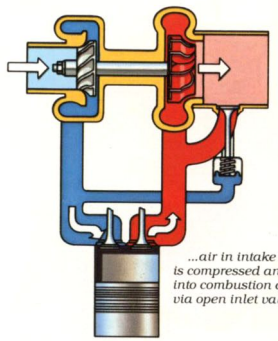


Each piston is oil cooled via tiny individual nozzles.

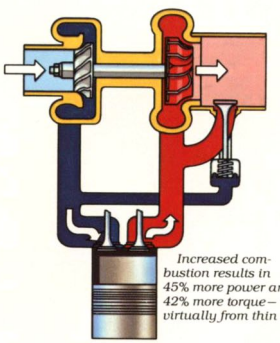
The "taller" rear axle ratio allowed by all this added thrust is what ultimately allows Mercedes-Benz turbodiesels, for all their power, to hold the line on fuel efficiency. For it is a final amazing fact that the turbodiesel-powered Mercedes-Benz develops no appreciable extra thirst for fuel.



Exhaust gas from combustion spins blades of turbine wheel (red) and connected compressor wheel (blue)...



...air in intake manifold is compressed and forced into combustion chamber via open inlet valve...



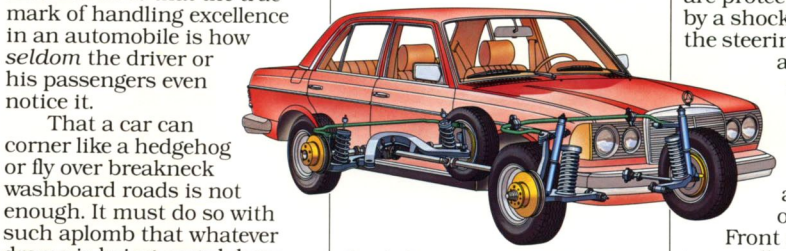
Increased combustion results in 45% more power and 42% more torque—virtually from thin air.

HANDLING

Superb handling never advertises itself. The better it is, the less the occupants should feel it.

Mercedes-Benz engineers believe that the true mark of handling excellence in an automobile is how *seldom* the driver or his passengers even notice it.

That a car can corner like a hedgehog or fly over breakneck washboard roads is not enough. It must do so with such aplomb that whatever drama is being waged down between the suspension and tires and road, life inside the



Mercedes-Benz suspension is designed to combine riding comfort with handling stability.

Caliper-type disc brake is fitted to every wheel of every new Mercedes-Benz.

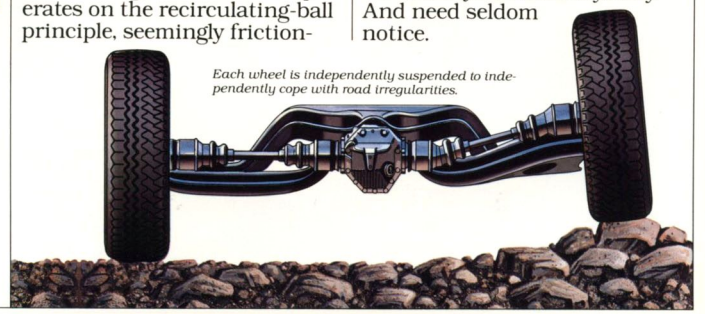
cabin remains unruffled, serene, secure.

An intimidating technical mandate. Unfazed, the Mercedes-Benz engineers have devised some extraordinary technical solutions.

One is to fit every Mercedes-Benz with perhaps the most *cultivated* fully independent suspension system found in any production automobile in the world. Development cycle: 50-odd years. Cost: extravagant, by mass-production standards. Every Mercedes-Benz shock absorber is a dual-chamber, nitrogen gas-pressured shock absorber. There is an almost medical precision to the steering. No mere rack-and-pinion system for Mercedes-Benz; the liquid-smooth, hair-fine system the engineers devised operates on the recirculating-ball principle, seemingly friction-free. Your hands on the wheel are protected from road jolts by a shock absorber built into the steering mechanism. Servo-assistance lightens effort while retaining steering feel, allowing you to sense the loads to which the forward tires are being subjected on the road.

Front suspension geometry on all models except the 380 SL incorporates the "zero-offset" principle. This is technicalese for a means of literally *forcing* the front wheels to follow a true forward line, come potholes or panic stops.

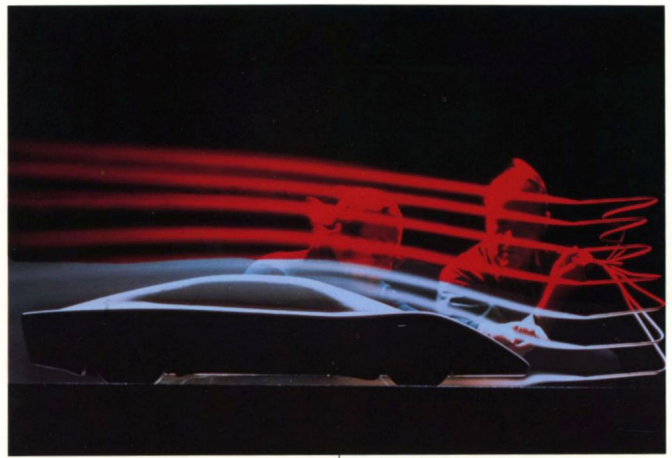
The net benefit of all this technical esoterica? Handling behavior as near to *neutral* as possible; a steadiness, a predictability, a freedom from sudden changes in direction or adhesion or steering feel—even in violent maneuvers. Handling excellence, in brief, on which you can always rely. And need seldom notice.



Each wheel is independently suspended to independently cope with road irregularities.

AERODYNAMICS

Mercedes-Benz uses aerodynamics not only to cheat the wind but to manage its flow over the car.



Another experimental aerodynamic exercise undergoes its trial by wind. Mercedes-Benz maintains not one but two wind tunnels.

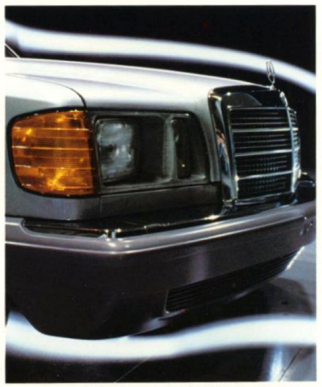
More than half the energy needed to keep a car moving at 50-mph is expended in overcoming the resistance of the wind. Enter the science of aerodynamics. Reduce wind resistance by 10 percent through the shaping of the car's body—and increase fuel efficiency by a precious three to four percent.

Liberated from the styling syndrome and the tyranny of endless facelifts, Mercedes-Benz engineers are unusually free to exploit aerodynamics. Exploit it they have. The 300 SD and the 380 SEL rank among the most aerodynamically efficient sedans sold in America.

But Mercedes-Benz sees aerodynamics in a context far broader than drag coefficients alone. Every Mercedes-Benz incorporates a comprehensive *airflow management system*—channeling and controlling the airflow as it moves over and around the car's surfaces and turning it to useful work.

Thus, blade-like guides are located at either windshield edge to intercept the airflow and duct it up over the roof. In wet weather, rain is thereby prevented from smearing the side windows. The outside mirror housing is an airfoil meant to conduct passing rainwater away from the glass. Even the tail light lenses are part of the system; their deeply ribbed lenses are meant to harness the airflow behind the car, using it in effect to remain more visible to following traffic in foul weather.

The final Mercedes-Benz aerodynamic achievement is perhaps the greatest: cheating the wind has never been allowed such priority that passenger space, or visibility, or any other vital aspect of automobile design must be cheated as well. Aerodynamic or not, a Mercedes-Benz must remain in every particular a Mercedes-Benz.



Smoothly contoured nose of a 380 SEL Sedan helps cleave the airstream with minimal turbulence and superb aerodynamic efficiency.

CONTROLS

The controls of a machine that moves at 80 feet per second should not be designed by stylists.

A Mercedes-Benz is one and a half tons of intricate mechanical systems and subsystems, interacting to generate and channel sufficient power to move you over the road at 80 feet per second or more.

Yet by dint of applied ergonomic science—the science of fitting man to machine—the engineers have made its operation and control almost uncannily simple and physically easy.

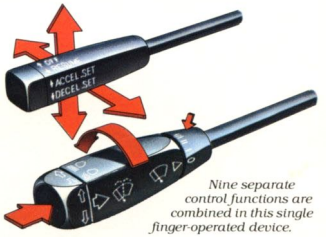
One reason is that they have designed confusion *out* of your driving life. Driving is a skill, not an entertainment; distracting gadgets are absent and the number of controls the minimum possible. Operation

Thumbwheel and pushbuttons help make operation of climate control system quick, crisp and simple.

of turn indicators, three-mode wipers, windshield washer, headlamp flasher and dip-switch has, for example, been combined in one steering-column lever. Every control is positioned for quick access and use (and for safety; the

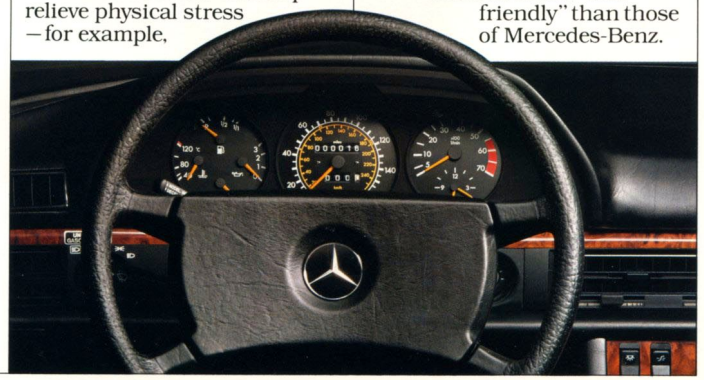
headlight switch, for instance, can be activated only by the driver). Each control is a different shape so that you can soon learn to use it by feel, without having to take your eyes off the road. Instruments lie directly in the driver's sight path, behind a reverse-angle transparent panel that helps minimize glare and reflections.

Some controls can help relieve physical stress—for example, the automatic cruise control device fitted to every Mercedes-Benz. It allows the driver to rest his throttle foot on sustained highway trips, and for safety's sake is quickly activated or de-activated by feel, with a mere tap.



Nine separate control functions are combined in this single finger-operated device.

There may be no more technically sophisticated automobiles than those of Mercedes-Benz. Thanks to diligent application of ergonomics, there may be no automobiles more "user-friendly" than those of Mercedes-Benz.



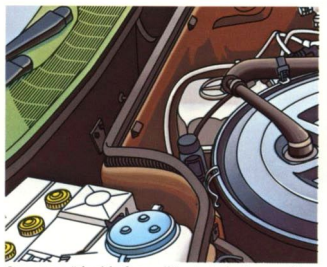
COMFORT

You're not in the lap of luxury but in the hands of science. And you'll find it's a better place to be.

The Mercedes-Benz owner may spend more time in his automobile than anywhere but his own home and his office. Studies show that in this highly mobile world of ours, he tends to exceed the already peripatetic norm—driving his car far more often, using it far more heavily, rolling up far higher annual mileages, than is the case for the statistically average driver in the statistically average car.

A regular two hours' daily driving, for example, multiplies out to a solid *month* per year and literally years over a lifetime, spent behind the wheel. Such intense use cannot be met with a few luxury trappings and some foam rubber padding. Comfort is for the Mercedes-Benz driver a vital necessity.

Each seat is thus an intricate biomechanical support system, meant to anticipate and help curb physical fatigue spawned by long hours of enforced inactivity in a sitting position. Firm upholstering allows the restricted body to constantly, minutely shift its posture and relieve tension. Seat squabs and backrests are shaped, contoured and padded to support critical joints and body regions, e.g. the lower back and the thighs. A moving automobile generates myriad low-amplitude vibrations that your senses may not detect,



Ingenious "double firewall" acts to further muffle engine noise.

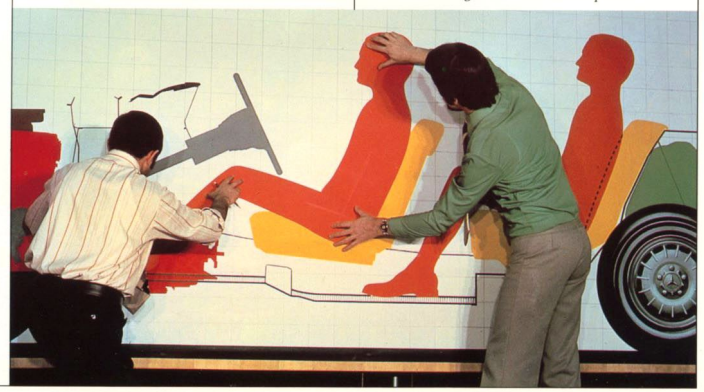
but your body can; a network of steel coil springs within the seat helps absorb and suppress them.

The driver in a Mercedes-Benz can almost infinitely adjust his position by moving the seat fore and aft, altering its height, and changing the backrest angle.

The total volume of cabin area needed to ensure proper shoulder, head, hip and legroom is of course a sacrosanct Mercedes-Benz design criterion. (In some models, that volume measures 100 cu. ft.) Noise abatement is so effective that even the 300TD Turbodiesel—a station wagon—has registered a mere 76 dBA of interior noise at 70 mph, according to *Road & Track*. Enlightened aerodynamics considerably muffle that annoying exterior noise known as wind turbulence.

The sum total of this scientific approach to comfort is not a sense of plush luxury but something infinitely more worthwhile: a liveable environment in which to spend those hours and months and years behind the wheel.

A Mercedes-Benz is not designed around a styling theme. It is designed around its occupants.



ACTIVE SAFETY

The car should be designed to lend its driver all possible aid in avoiding the hazards of the road.

Driving life is fraught with rude surprises sprung by traffic, by weather, by the road. Mercedes-Benz acknowledges no higher engineering priority than that of helping you cope with sudden adversity.

Furthermore, it is a bedrock element of the Mercedes-Benz design philosophy that such handling agility be equally available to the house-

The most powerful part of every Mercedes-Benz is its brakes.

wife *and* the aficionado. It is not enough that a car handles superbly; that handling must require no special skill or experience on the part of the driver to be called into play. True, the sophisticated sports car driver can call forth impressive abilities from a Mercedes-Benz as he pushes it to the limits of adhesion; but the same automobile, in the hands of a less experienced and less skilled driver, is meant to feel predictable and trustworthy—to serve him equally well.

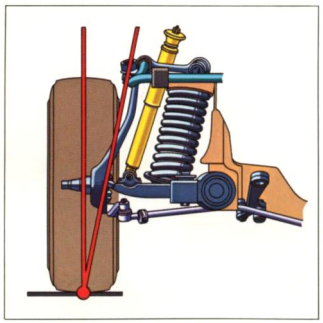
Those very traits that help make your Mercedes-Benz so relaxing to drive—keen reflexes, stable roadholding, predictable behavior even in extremes—can in urgent moments make the difference between trouble and its avoidance.

A Mercedes-Benz is *quick-witted*, not sluggish. When split seconds count, so does instantaneously responsive steering.

A Mercedes-Benz is *sure-footed*, not ponderous. Four-wheel fully independent suspension helps all four wheels stick to the road.

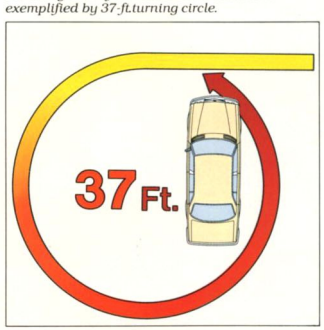
Your first defense against approaching trouble may be simply to *see* it. Visibility from the driver's position is thus superb, even in the rain. (The wipers clear 78 percent of the windscreen area.) The Mercedes-Benz driving environment itself performs a safety role: from seats to climate to the ergonomically immaculate layouts of instruments and controls, the designers' aim is to keep you as alert, as efficient a driver as possible.

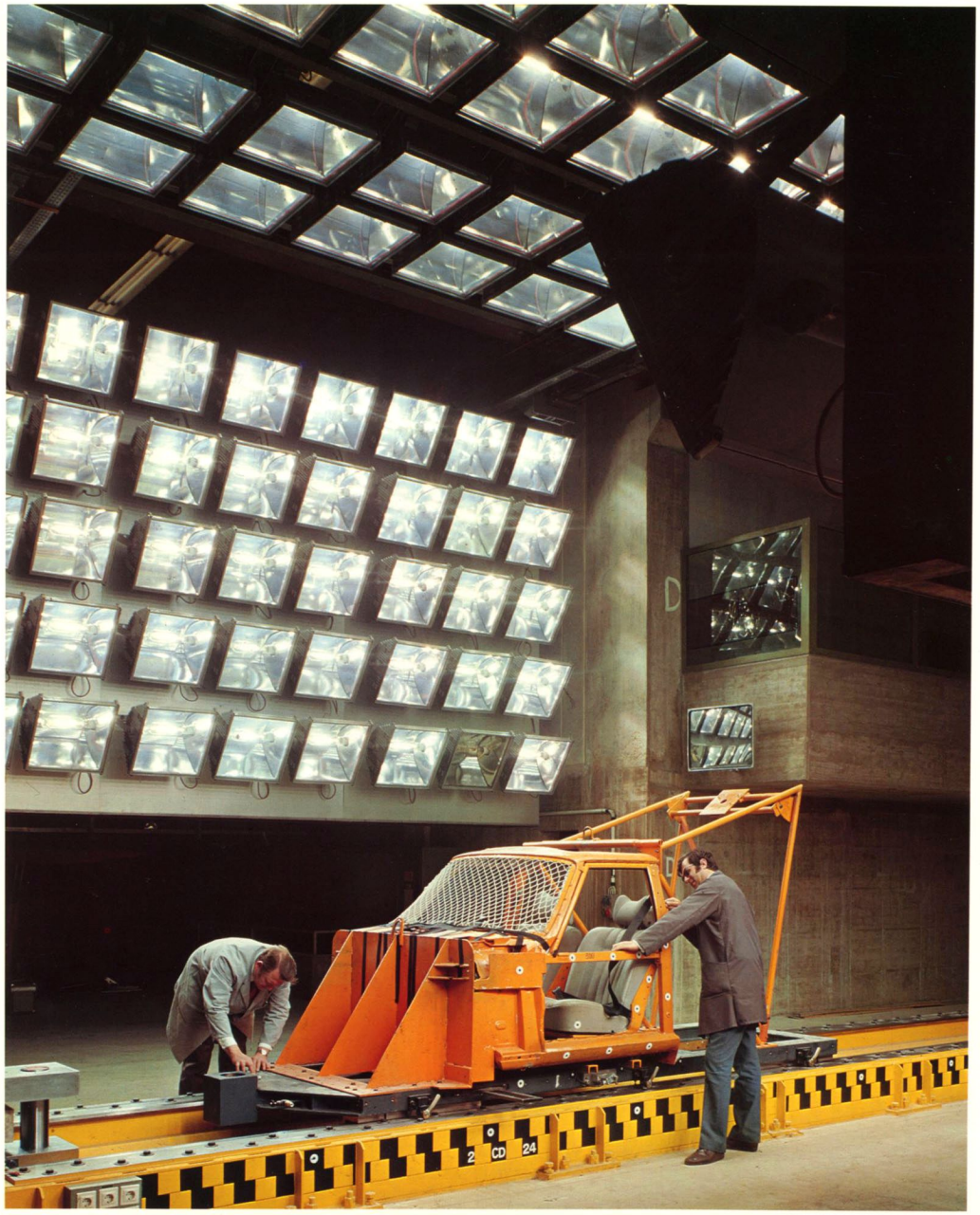
But what if trouble is ultimately unavoidable? What if a mishap should occur? The engineering emphasis moves from active safety to passive safety, to protection of the car's occupants in event of an impact. It is an engineering story that every potential Mercedes-Benz owner should know, and it is told in the section overleaf.



Zero-offset front steering geometry helps force the car to follow a true forward path.

Handling ease of Mercedes-Benz sedans is exemplified by 37-ft.turning circle.





PASSIVE SAFETY

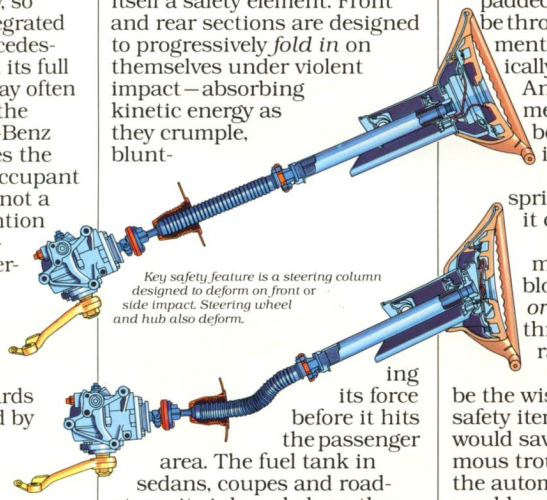
By building in 120 safety features, Mercedes-Benz meets the most important standard of all: its own.

Occupant protection has been so smoothly, so deeply, so skillfully integrated into the design of Mercedes-Benz automobiles that its full and amazing extent may often go unnoticed, even by the experienced Mercedes-Benz owner. This irony leaves the engineers unmoved. Occupant protection is for them not a sales point calling attention to itself. It is an obligation, its strictness determined not by public taste or government mandate but by the internal standards of Mercedes-Benz.

That those standards are unique is conveyed by one simple fact: 120 safety features are standard on every Mercedes-Benz.

Mercedes-Benz door locks are so strong that any one could take the weight of the entire car.

A Mercedes-Benz body is itself a safety element. Front and rear sections are designed to progressively *fold in* on themselves under violent impact—absorbing kinetic energy as they crumple, blunting its force before it hits the passenger area. The fuel tank in sedans, coupes and roadsters sits inboard above the rear axle, shielded by steel bulkheads. (The Station Wagon compensates with a strengthened structure in the tank area.) In all sedans, the steering column is a complex safety device that can yield on front *or* lateral impact; the steering wheel itself is deformable, its hub a flat padded plate. Pin-type door locks actually exceed U.S. federal strength standards.



Key safety feature is a steering column designed to deform on front or side impact. Steering wheel and hub also deform.

There is literally not a sharp edge in the cabin area. Doors and their sills, front seatbacks, roof, sun visors, the underside of the instrument panel, even the shift knob—padded. Should an occupant be thrown against the instrument panel, it is scientifically programmed to yield.

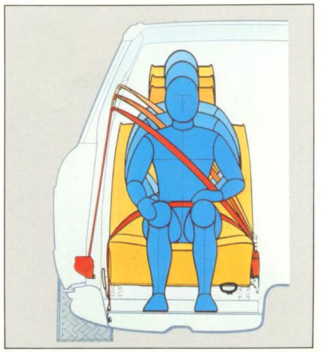
An anti-inertial lock is meant to keep the glovebox door from bursting open in an impact.

The inside mirror is spring-mounted; if struck, it can harmlessly yield.

Outside mirrors are meant to yield to the blow if struck from fore *or* aft—as is the famous three-pointed star radiator emblem.

Few people might be the wiser if many of these safety items were omitted; this would save the engineers enormous trouble and cost. But the automobile that remained would not deserve to be called a Mercedes-Benz.

These seat belts can be finely adjusted.

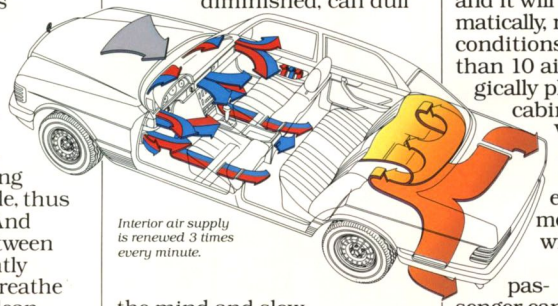


CLIMATE

The chance to breathe clean, fresh air inside a moving car is no luxury. It is a necessity.

Mercedes-Benz engineers have expended great care and ingenuity on your thermal well-being—as usual, for the least frivolous of reasons.

A benign interior climate does of course feel sumptuous. But it can also minimize physical discomfort and stress—making you a more comfortable, thus more efficient driver. And there is a vital link between your ability to constantly breathe clean, fresh air and your ability to react decisively when quick driving decisions must be made. The brain functions best when you breathe air with a high oxygen content, in brief; stale air, its oxygen content diminished, can dull the mind and slow the reflexes.



Interior air supply is renewed 3 times every minute.

Separate ventilation console is provided for rear passengers in 300SD, 380SEL, 380SEC.

Every new Mercedes-Benz is, therefore, outfitted at the works with an automated interior climate, from the 240D's sophisticated air conditioning system to the electronic automatic climate control system built into all other models sold in America. With the latter, cabin air is exchanged completely every 20 seconds; you can dial the year-round interior temperature you prefer and it will be maintained automatically, regardless of exterior conditions. There are no fewer than 10 air outlets strategically placed about the cabin.

Ventilation outlets are designed into the middle and extreme ends of the instrument panel and fitted with adjustable vanes. Driver and front passenger can each direct the volume and path of airflow to suit their individual preferences. Certain sedans furnish a separate ventilation console for rear-seat passengers as well.

Automatic climate control is simple, efficient to operate.

CONVENIENCES

So many built-in conveniences that you may feel deprived when riding in lesser automobiles.

- Handy parcel nets are attached to the backs of both front seats in all four and five-passenger models.
- Illuminated vanity mirrors grace the sun visors of all models except the 380 SL.
- Aerodynamically shaped, driver-controlled outside mirror, standard on all models.

- A folding central armrest is built into the rear bench seat of every Mercedes-Benz.
- Console-mounted ventilation and air conditioning outlet serves rear seat passengers in 300 SD, 380 SEL and 380 SEC.
- Electric seat adjustment, standard on 300 SD, 380 SEL, 380 SEC.

- A center sun visor helps reduce glare on models 300 SD, 380 SEL and 380 SEC.
- This button makes radio antenna raise, lower or simply vanish, on all models.
- Ingenious seat belt mounting mechanism lets individual wearer adjust belt to suit driver and front passenger height on models 300 SD, 380 SEL and 380 SEC.

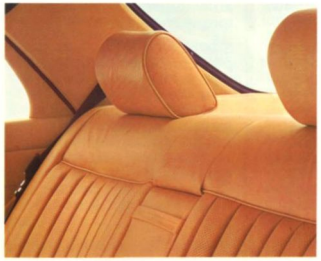
- There are two reading lamps like this in the rear quarters of the 300 SD and 380 SEL Sedans.
- Front doors are deeply padded, for safety and comfort, with map pockets for convenience on all models.
- Central locking system instantly seals or unseals all doors, fuel filler port and trunk with the twist of a key in the driver's door.

OPTIONS

For 1983, the Mercedes-Benz list of extra-cost options is as sensible—and brief—as ever.

Buying a new automobile in the world of today all too often feels like buying *two* new automobiles: the basic package, then the extra package of conveniences and necessities somehow listed as extra-cost options.

This is decidedly not the case with the automobiles of Mercedes-Benz. As noted elsewhere, standard equipment on Mercedes-Benz automobiles is



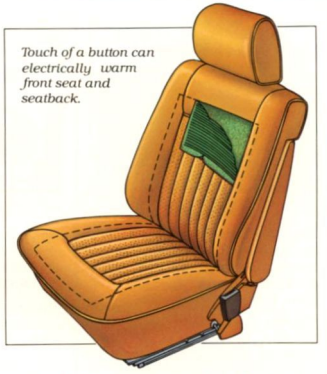
Rear seat headrests are an extra-cost option in all sedans, coupes, and the 300TD Station Wagon.

almost exhaustively complete and includes—on all passenger cars—power-assisted brakes and steering, automatic climate control (except 240 D which has air conditioning), electronic cruise control, stereo radio with cassette player, central vacuum locking system and steel belted radial tires. For 1983, the buyer has the choice of any Mercedes-Benz metallic paint color as a no cost option, except the 240 D. And the minor but welcome amenities included in every new Mercedes-Benz constitute a lengthy, seemingly inexhaustible list. Below, the few genuinely optional extra-cost items available:

For the 240 D, 300 D, 300 CD and 300 TD buyer, only ten such options suggest themselves: 1) sliding roof with wind deflector—manual or electric on 240 D, electric on 300 D and 300 CD, manual only on 300 TD. 2) Metallic paintwork as a no cost option, except the 240 D. 3) Front seats with orthopedic backrests. 4) Rear seat headrests. 5) Heated seats/backs (front only). 6) Natural leather upholstery. 7) Velour upholstery. 8) AM/FM electronic stereo radio with cassette player. 9) Rear-facing 3rd seat, 300 TD. 10) Retractable partition net and luggage cover, 300 TD. Additionally, four-speed automatic transmission, forged light alloy wheels, and electric window lifts are extra-cost options on the 240 D.

The extra-cost options list is even shorter for the 300 SD, 380 SEL, 380 SL and 380 SEC. For the 300 SD—natural leather or velour upholstery, rear seat headrests, heated seats and seat backs, electric sliding roof with wind deflector, front bucket seats with orthopedic backrests, period.

For the 380 SEL—rear seat headrests, heated seats and seat backs, electrically operated sliding roof with wind deflector, front bucket seats with orthopedic backrests. For the 380 SL, natural leather upholstery, bucket seats with orthopedic backrests, heated seats and seat backs. And for the 380 SEC—electric sliding roof with wind deflector, front bucket seats with orthopedic backrests, rear headrests, heated seats and seat backs (front seats only).



Touch of a button can electrically warm front seat and seatback.

A sliding roof is available on all models except 380 SL.

A reference guide to all Mercedes-Benz passenger cars for 1983.

240D

Engine: Four-cylinder o.h.c. in-line diesel engine with mechanical injection pump and pre-chamber fuel injection, five main bearings.

Transmission: Baulk-ring synchromesh four-speed manual gearbox; floor shift; optional extra: four-speed automatic transmission with torque converter.

Suspension: Front: fully independent double A-arms with non-parallel pivot axis, zero offset steering, coil springs, gas pressurized shock absorbers and anti-sway bar. Rear: Fully independent diagonal pivot axle. Four parallel constant velocity couplings. Coil springs. Gas pressurized shock absorbers. Anti-sway bar.

Steering: Daimler-Benz recirculating ball steering, gear segment actuated by power assist, 3.2 turns lock to lock.

Brakes: Disc brakes on all four wheels with vacuum-servo power assist. Total swept area 456 sq. in. Dual braking circuits with dual reservoir master cylinder. Parking brake with separate drums and shoes at each rear wheel.

Bodywork: All-steel welded unit body.

Major standard equipment: Air conditioning; electronic cruise control; central vacuum locking system; AM/FM stereo radio with cassette player; light alloy wheels with wheel covers.

300D

Engine: Five-cylinder turbocharged o.h.c. in-line diesel engine with pre-chamber fuel injection, six main bearings.

Transmission: Four-speed automatic transmission with torque converter.

Suspension: Front: fully independent double A-arms with non-parallel pivot axis, zero offset steering, coil springs, gas pressurized shock absorbers and anti-sway bar. Rear: fully independent diagonal pivot axle. Four parallel constant velocity couplings. Coil springs. Gas pressurized shock absorbers. Anti-sway bar.

Steering: Daimler-Benz recirculating ball steering, gear segment actuated by power assist, 3.2 turns lock to lock.

Brakes: Disc brakes on all four wheels with vacuum-servo power assist. Total swept area 456 sq. in. Dual braking circuits with dual reservoir master cylinder. Parking brake with separate drums and shoes at each rear wheel.

Bodywork: All-steel welded unit body.

Major standard equipment: Electronic automatic climate control system; electronic cruise control; central vacuum locking system; AM/FM stereo radio with cassette player; electric window lifts; forged light alloy wheels.

300TD

Engine: Five-cylinder turbocharged o.h.c. in-line diesel engine with pre-chamber fuel injection, six main bearings.

Transmission: Four-speed automatic transmission with torque converter.

Suspension: Front: fully independent double A-arms with non-parallel pivot axis, zero offset steering, coil springs, gas pressurized shock absorbers and anti-sway bar. Rear: fully independent diagonal pivot axle. Four parallel constant velocity couplings. Coil springs. Gas pressurized shock absorbers. Anti-sway bar. Two hydropneumatic self-leveling suspension units.

Steering: Daimler-Benz recirculating ball steering, gear segment actuated by power assist, 3.2 turns lock to lock.

Brakes: Disc brakes on all four wheels with vacuum-servo power assist. Total swept area 456 sq. in. Dual braking circuits with dual reservoir master cylinder. Parking brake with separate drums and shoes at each rear wheel.

Bodywork: All-steel welded unit body.

Major standard equipment: Electronic automatic climate control system; electronic cruise control; central vacuum locking system; AM/FM stereo radio with cassette player; electric window lifts; forged light alloy wheels. Roof rack.

300CD

Engine: Five-cylinder turbocharged o.h.c. in-line diesel engine with pre-chamber fuel injection, six main bearings.

Transmission: Four-speed automatic transmission with torque converter.

Suspension: Front: fully independent double A-arms with non-parallel pivot axis, zero offset steering, coil springs, gas pressurized shock absorbers and anti-sway bar. Rear: fully independent diagonal pivot axle. Four parallel constant velocity couplings. Coil springs. Gas pressurized shock absorbers. Anti-sway bar.

Steering: Daimler-Benz recirculating ball steering, gear segment actuated by power assist, 3.2 turns lock to lock.

Brakes: Disc brakes on all four wheels with vacuum-servo power assist. Total swept area 456 sq. in. Dual braking circuits with dual reservoir master cylinder. Parking brake with separate drums and shoes at each rear wheel.

Bodywork: All-steel welded unit body with additional reinforcement.

Major standard equipment: Electronic automatic climate control system; electronic cruise control; central vacuum locking system; AM/FM stereo radio with cassette player; electric window lifts; forged light alloy wheels.

300SD

Engine: Five-cylinder turbocharged o.h.c. in-line diesel engine with pre-chamber fuel injection, six main bearings.

Transmission: Four-speed automatic transmission with torque converter.

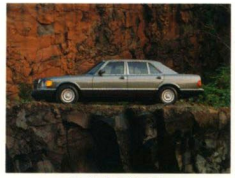
Suspension: Front: fully independent double A-arms with non-parallel pivot axis, zero offset steering, coil springs, gas pressurized shock absorbers and anti-sway bar. Rear: fully independent diagonal pivot axle. Four parallel constant velocity couplings. Coil springs. Gas pressurized shock absorbers. Anti-sway bar.

Steering: Daimler-Benz recirculating ball steering, gear segment actuated by power assist, 2.9 turns lock to lock.

Brakes: Disc brakes on all four wheels with vacuum-servo power assist. Total swept area 456 sq. in. Dual braking circuits with dual reservoir master cylinder. Parking brake with separate drums and shoes at each rear wheel.

Bodywork: All-steel welded unit body.

Major standard equipment: Electronic automatic climate control system; electronic cruise control; central vacuum locking system; Electronic AM/FM stereo radio with cassette player; electric window lifts; electric front seat adjustment; forged light alloy wheels.



380SEL

Engine: Eight-cylinder light alloy V-type of 3.8 liters displacement, continuous flow fuel injection gasoline system.

Transmission: Four-speed automatic transmission with torque converter.

Suspension: Front: fully independent double A-arms with non-parallel pivot axis, zero offset steering, coil springs, gas pressurized shock absorbers and anti-sway bar. Rear: fully independent diagonal pivot axle. Four parallel constant velocity couplings. Coil springs. Gas pressurized shock absorbers. Anti-sway bar.

Steering: Daimler-Benz recirculating ball steering, gear segment actuated by power assist, 2.9 turns lock to lock.

Brakes: Disc brakes on all four wheels with vacuum-servo power assist. Total swept area 456 sq. in. Dual braking circuits with dual reservoir master cylinder. Parking brake with separate drums and shoes at each rear wheel.

Bodywork: All-steel welded unit body.

Major standard equipment: Electronic automatic climate control system; electronic cruise control; central vacuum locking system; Electronic AM/FM stereo radio with cassette player; electric window lifts; electric front and rear seat adjustment; natural leather or velour upholstery; forged light alloy wheels.

380SL

Engine: Eight-cylinder light alloy V-type of 3.8 liters displacement, continuous flow fuel injection gasoline system.

Transmission: Four-speed automatic transmission with torque converter.

Suspension: Front: fully independent with unequal length A-arms, coil springs, gas pressurized shock absorbers, anti-sway bar. Rear: fully independent diagonal pivot axle. Four parallel constant velocity couplings. Coil springs. Gas pressurized shock absorbers. Anti-sway bar.

Steering: Daimler-Benz recirculating ball steering, gear segment actuated by power assist, 3.0 turns lock to lock.

Brakes: Disc brakes on all four wheels with vacuum-servo power assist. Total swept area 456 sq. in. Dual braking circuits with dual reservoir master cylinder. Parking brake with separate drums and shoes at each rear wheel.

Bodywork: All-steel welded unit body.

Major standard equipment: Electronic automatic climate control system; electronic cruise control; central vacuum locking system; Electronic AM/FM stereo radio with cassette player; electric window lifts; removable steel hardtop; folding convertible top; forged light alloy wheels.

380SEC

Engine: Eight-cylinder light alloy V-type of 3.8 liters displacement, continuous flow fuel injection gasoline system.

Transmission: Four-speed automatic transmission with torque converter.

Suspension: Front: fully independent double A-arms with non-parallel pivot axis, zero offset steering, coil springs, gas pressurized shock absorbers and anti-sway bar. Rear: fully independent diagonal pivot axle. Four parallel constant velocity couplings. Coil springs. Gas pressurized shock absorbers. Anti-sway bar.

Steering: Daimler-Benz recirculating ball steering, gear segment actuated by power assist, 2.9 turns lock to lock.

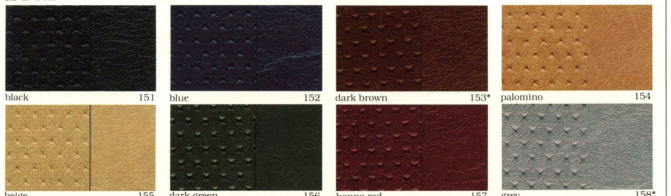
Brakes: Disc brakes on all four wheels with vacuum-servo power assist. Total swept area 456 sq. in. Dual braking circuits with dual reservoir master cylinder. Parking brake with separate drums and shoes at each rear wheel.

Bodywork: All-steel welded unit body with additional reinforcement.

Major standard equipment: Electronic automatic climate control system; electronic cruise control; central vacuum locking system; Electronic AM/FM stereo radio with cassette player; electric window lifts; natural leather or velour upholstery; electric front seat adjustment; forged light alloy wheels.

Upholstery

M-B Tex



black 151 | blue 152 | dark brown 153* | palomino 154
beige 155 | dark green 156 | henna red 157 | grey 158*

Leather

black 251 | blue 252 | dark brown 253** | palomino 254
beige 255 | dark green 256 | henna red 257 | grey 258**

Velour

black 951 | blue 952 | dark brown 953† | palomino 954
beige 955 | dark green 956 | henna red 957 | grey 958†

*Available only on 300 SD & 380 SL. **Available only on 300 SD, 380 SEL, 380 SL & 380 SEC †Available only on 300 SD & 380 SEL.
For 380 SEC Velour upholsteries, see upholstery folder available from your Mercedes-Benz dealer.

Standard Paintwork

black 040 | manilla beige 681 | orient red 501 | pastel beige 684 | deep blue 900
russet brown 427 | classic white 737 | signal red 568 | ascot grey 751 | mesa red 585
moss green 803 | light ivory 623 | forest green 822 | sahara yellow 673 | biscayne blue 312
sand beige 444 | midnight blue 904

Metallic Paintwork

anthracite grey 172 | cypress green 876 | lapis blue 932
champagne 473 | blue green 877 | manganese brown 480
thistle green 881 | astral silver 735 | silver blue 930

Mercedes-Benz of North America, Inc.
One Mercedes Drive
Montvale, New Jersey 07645

Advertising and Sales Promotion Department
A-SP-82-534-425