

Mercedes-Benz C 63 AMG

September 11, 2007

Contents	Page
<u>Short version</u>	
The new Mercedes-Benz C 63 AMG A C-Class like never before	2
<u>Long version</u>	
Engine and drive system Engine capacity king with 336 kW/457 hp	4
Chassis and brake system Dynamism to perfection	8
Design and equipment More AMG than ever before	12
Development and testing Doing it the hard way	17
History Twenty years of and excitement and exclusivity	20
Technical data	24

The descriptions and information in this press kit apply to the international Mercedes-Benz model range and may vary from country to country.

A C-Class like never before

Mainz/Affalterbach – In the German Touring Car Masters (DTM) the new AMG C-Class ensures exciting motor racing at the highest level. And now its road-going sister model is celebrating its debut: the new C 63 AMG. Available in saloon and estate versions, the top C-Class model is powered by an AMG 6.3-litre V8 engine. Developing a peak output of 336 kW/457 hp and a maximum torque of 600 Nm, the high-revving, naturally aspirated engine delivers unrivalled figures in this segment. The C 63 AMG accelerates from zero to 100 km/h in 4.5 seconds (estate 4.6 seconds); the top speed is electronically limited to 250 km/h.

Power transmission is in the capable hands of the AMG SPEEDSHIFT PLUS 7G-TRONIC. Equipped with AMG steering-wheel shift paddles and featuring three drive programs, the seven-speed automatic offers everything from a seriously sporty to a comfort-oriented driving style. The revving function when changing down is a completely new feature. In conjunction with the newly developed front axle, AMG speed-sensitive sports steering and the new, 3-stage ESP[®], the AMG sports suspension with 18-inch AMG light-alloy wheels ensures both outstanding driving pleasure and exemplary driving dynamics. The AMG high-performance brake system with large-dimensioned internally ventilated and perforated disc brakes all-round ensures flawless deceleration even during highly dynamic driving.

Design and equipment: more distinctive than ever before

The quality of design and equipment in the new C 63 AMG is more than a match for its outstanding technology. The AMG eight-cylinder top model differentiates itself from the production C-Class more than ever before: in addition to AMG bodystyling, characteristic brand features include the bonnet with power domes, the distinctive AMG radiator grille, flared front wings, the AMG rear apron with a black diffuser insert, the AMG sports exhaust system with two chromed twin tail-

pipes and the AMG spoiler lip. The interior is dominated by the distinctive AMG sports seats with integrated head restraints, the AMG performance steering wheel in a three-spoke design with a 365-mm rim diameter and a flattened lower section as well as the tubular-design AMG instrument cluster with its AMG main menu. The combination of expressive design, a decidedly sporty interior and superb everyday practicality makes the C 63 AMG a unique high-performance vehicle. The market launch of the saloon and estate models will commence in early 2008. Retail prices incl. 19% VAT will be 67,235 euros (C 63 AMG Saloon) and 69,853 euros (C 63 AMG Estate).

190 E 3.2 AMG from 1987 was the inspiration for the C 63 AMG

To coincide with the 40th birthday of Mercedes-AMG GmbH, the new C 63 AMG cuts a very self-assured figure. The V8 top model is already the fifth generation of the AMG C-Class. The family tree goes right back to the 1993 C 36 AMG – the very first vehicle to emerge from the cooperation between Daimler-Benz and AMG. But the first steps were taken six years before. The 190 E 3.2 AMG unveiled in 1987 marked the beginning of the successful career of the dynamic and exclusive mid-range model from Affalterbach.

Contacts:

Wolfgang Zanker, tel. +49 711 17-75847, wolfgang.zanker@daimlerchrysler.com
Pietro Zollino, tel. +49 711 17-75855, pietro.zollino@daimlerchrysler.com

Website:

More news from DaimlerChrysler at: www.media.daimlerchrysler.com

Engine capacity king with 336 kW/457 hp

Wide, road-hugging and ready for action: the very appearance of the new C 63 AMG raises expectations. The bonnet with its prominent power domes is the first indication of the exceptional drive system of the new AMG high-performance car. Under the bonnet you will find an independently developed AMG 6.3-litre V8 engine, which generates a dominant 336 kW/457 hp at 6800 rpm from a 6208-cc displacement. In this respect, the C 63 AMG comes very close to the 470 or so horsepower delivered by the AMG C-Class racing touring car in the German Touring Car Masters (DTM). Such high output also benefits the power-to-weight ratio, which is a very favourable 3.6 kg/hp.

The torque developed by the AMG 6.3-litre V8 engine need also fear no comparison. The maximum 600 Nm at 5000 rpm is unrivalled in this class and the torque curve is equally impressive: from 2000 to 6250 rpm the driver always has more than 500 Nm on tap – ideal for powerful acceleration in any engine speed range. Thanks to its superior capacity, the AMG eight-cylinder engine delivers 30% more torque than comparable engines in its performance class.

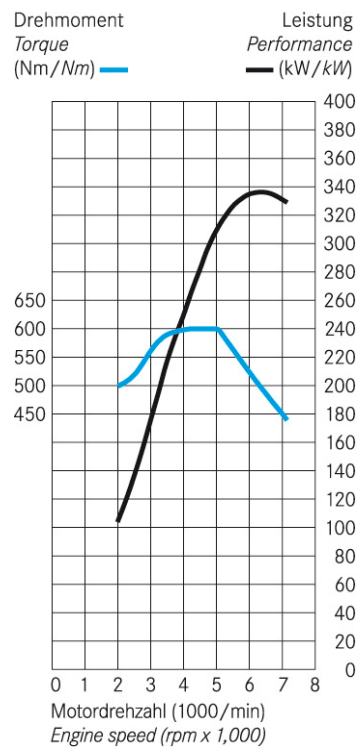
AMG 6.3-litre V8 based on thoroughbred racing technology

Introduced in 2005, the V8 engine is installed in numerous AMG high-performance cars and excels with its thoroughbred motor sports technology. Perfect cylinder charging is ensured by the vertical arrangement of the intake and exhaust ducts, as well as the magnesium variable intake manifold with two integral throttle flaps. Other high-tech features include variable camshaft adjustment, four-valve technology with bucket-type tappets, a particularly rigid aluminium crankcase of closed-deck design and the low-friction TWAS coating on the cylinder contact surfaces.

	C 63 AMG
Cylinder arrangement/	V8/
Valves per cylinder	4
Displacement cc	6208
Bore/stroke mm	102.2/94.6
Compression ratio	11.3:1
Output kW/hp	336/457
at rpm	6800
Max. torque Nm	600
at rpm	5000
Acceleration	
0 - 100 km/h s	4.5 (4.6)
Top speed km/h	250**
NEDC combined	
consumption in l/100 km	13.4 (13.7)

Werte in Klammern für T-Modell; *elektronisch begrenzt

Mercedes-Benz C 63 AMG
Leistungsdiagramm
Power Output Graph



AMG sports exhaust system for typical AMG eight-cylinder vocals

One of the outstanding strengths of the next-generation V8 engine from Mercedes-AMG is its high-revving flexibility. It reaches its maximum at 7200 rpm. With an all-new sporty AMG sound developed during extensive testing, the eight-cylinder Affalterbach engine offers the unique appeal of a high-revving, naturally aspirated engine – unmistakable at low, medium and high engine speeds. To minimise exhaust back pressure, the continuous dual-flow AMG sports

exhaust system features two chromed twin oval tailpipes with large cross-sections. The high-performance catalytic converter technology ensures optimum emission control. And it goes without saying that the C 63 AMG complies with all current emissions limits, including EU 4. The specific requirements of the US market, such as the LEV-II standard, On-Board Diagnosis II and the lambda sensor diagnosis present no obstacle. The fuel consumption of the C 63 AMG according to the NEDC is 13.4 l/100 km and 319 g/km CO₂ (Estate 13.7 l/100 km and 326 g/km CO₂).

The inspiring agility and spontaneous response of the V8 engine to the touch of the accelerator also have their roots in electronic fuel supply. Equipped with new components, they operate at a demand-actuated system pressure of 3.8 to 5.0 bar. According to power requirements and external temperature, fuel pressure is adjusted and regulated at lightning speed. The signal from the accelerator pedal is converted in milliseconds by the engine electronic system into the corresponding fuel pressure setting. Such control ensures rapid vehicle response and a sporty thrust across all load ranges and at all engine speeds.

Large radiators for optimum stability

In the interests of optimal reliability, the C 63 AMG has a particularly efficient water cooling system and large engine and transmission oil coolers. Located behind the large apertures in the AMG front apron, these coolers ensure non-critical operating temperatures at all times – even under the extreme stress of the race-track.

Like all AMG high-performance engines, the AMG 6.3-litre V8 is built in the AMG engine shop on the traditional "one man, one engine" principle. This means that one technician is responsible for hand-assembling a complete V8 engine to the highest quality standards – which is attested to by their signature on the AMG engine plate.

AMG SPEEDSHIFT PLUS 7G-TRONIC with blipping function

Page 7

This high-performance eight-cylinder engine has the perfect partner in the form of the AMG SPEEDSHIFT PLUS 7G-TRONIC transmission. Equipped with AMG aluminium steering-wheel shift paddles and three driving modes, the seven-speed automatic transmission allows a decidedly sporty or more comfort-oriented style of driving according to the driver's preference. The different modes - "S" (Sport), "C" (Comfort) and "M" (Manual) differ in their shift characteristics and speed: gearshifts in "S" mode are around 30% faster than in "C" and no less than around 50% faster in "M" mode. Pressing a button next to the selector lever is sufficient to activate the desired driving program.

The new C 63 AMG is the very first AMG car to feature an automatic throttle-blipping function during downshifts. This not only enhances the driver's emotional experience - the virtually jolt-free downshifting process also reduces the load-change responses and has a particularly positive effect when braking before bends on the racetrack.

Dynamism to perfection

The dynamic driving talent of the new C 63 AMG is apparent at first glance. The flared wings conceal a completely new-design three-link front suspension with a wider track and new speed-sensitive AMG sports steering for high-speed cornering and awesome agility. The firm-setting springs and gas-filled shock absorbers on the all-new AMG sports suspension ensure optimum contact with the road and low body movement when taking corners at high speeds.

The new front axle features a track width increased to 35-mm to reduce dynamic wheel load when cornering. A series of measures ensure substantially increased stability and precision in all driving scenarios. The new-design suspension at the front axle is 100% firmer, which makes for significantly improved steering precision. A further advantage becomes apparent when braking. The new suspension ensures instantaneous brake system response even under dynamic loads.

In combination with completely newly configured elasto-kinematics, the new wheel location provides greatly improved lateral dynamics and allows the driver of the C 63 AMG to benefit from significantly higher cornering speeds. A larger torsion bar stabiliser, new head bearings and dampers with rebound buffer springs further enhance this stability and precision. Steering feedback is also improved by the new kinematics. The speed-sensitive AMG sports steering has a ratio of 13.5:1, but feels more direct as a result of moving what is termed the instant centre of motion at the front axle. A more rigid Hardy disc in the steering column, as well as modified steering characteristics, make a further contribution to increased precision.

Improved multi-link independent rear suspension with increased track width

The multi-link independent rear suspension has also been thoroughly re-engineered, with a 12-mm-wider track and more camber leading to improved cornering performance. Reinforced drive shafts and drive joints increase fatigue strength and round off the improvements to the rear suspension of the C 63 AMG. The completely newly developed AMG sports suspension combines outstanding handling dynamics with the long-distance comfort to be expected of a Mercedes – which also means that the C 63 AMG has the characteristic virtues of a genuine AMG.

18-inch AMG light-alloy wheels, 19-inch wheel/tyre combination on request

The C 63 AMG is appropriately fitted with new 18-inch AMG light-alloy wheels in a five-spoke design. Painted in titanium grey, these high-gloss wheels in size 9.0 x 18 and 8.5 x 18 are fitted with wide-base tyres in size 235/40 R 18 (front) and 255/35 R 18 (rear). Even more dynamic handling is possible with the optionally available 19-inch AMG titanium grey light-alloy wheels in a multi-spoke design with a high-gloss finish. The front wheels are in size 8.0 x 19 with 235/35 tyres, with 9.0 x 19 wheels and 255/30 R 19 tyres at the rear.

Generously dimensioned, fade-resistant AMG high-performance brake system

Internally ventilated and perforated disc brakes all-round reside behind the spokes of the AMG wheels. The front brakes have 360 x 36 mm discs with six-piston fixed callipers, while 330 x 26 mm discs with four-piston fixed callipers handle deceleration at the rear. The AMG high-performance brake system is characterised by precisely metered braking, the shortest stopping distances and high fade resistance.

3-stage ESP[®] with Sport function as a new feature in the C 63 AMG

Page 10

The Electronic Stability Program ESP[®] is specifically configured for the dynamic performance of the C 63 AMG, which is the first AMG model to feature 3-stage ESP[®] with a Sport function. This system offers three different control settings and is a logical further development of the AMG ESP[®] philosophy. The ESP[®] button in the centre console enables the driver to choose between three modes – "ESP ON", "ESP SPORT" and "ESP OFF" – the currently active mode is shown in the central display of the AMG instrument cluster.

In "ESP ON" mode, the onset of handling instability leads to braking intervention at one or more of the wheels, accompanied by a reduction in engine torque.

Briefly pressing the ESP[®] button activates "ESP SPORT". In this mode the braking intervention to counter oversteer or understeer, as well as the accompanying reduction in engine torque, allows a higher dynamic threshold and, for instance, corresponding drift angles – which means that the driver of the C 63 AMG benefits from considerably more active driving pleasure. ESP[®] is restored to its normal function as soon as the brake pedal is operated.

Prolonged pressure on the ESP[®] button activates "ESP OFF". There is no intervention to control the handling dynamics and no reduction in engine torque – thus increasing driving enjoyment even further. "ESP OFF" should only be used by experienced drivers on dedicated racetracks. In this mode too, operating the brake pedal restores all the normal functions of ESP[®].

The system's traction logic is active in all three ESP[®] modes. If one of the drive wheels threatens to spin, specific brake pressure is applied to virtually create the effect of a mechanical differential lock. This means that the engine power is transferred to the road even more effectively.

AMG performance package for enhanced dynamic handling

The AMG performance package and exclusive optional extras are available for the C 63 AMG. The components developed for the AMG *PERFORMANCE STUDIO* further enhance dynamic handling and are available for both the saloon and estate models.

The AMG performance package comprises:

- Rear-axle locking differential: the mechanical asymmetrical multiple-disk locking differential with a 40% locking factor under load increases traction and significantly enhances driving pleasure – particularly during sporty driving. The differential lock prevents or reduces slipping at the wheel with the least road grip by distributing torque to the wheel with the highest traction.
- AMG performance chassis: new springs at the front axle with approx. 10% higher spring rate and a new absorption detection system at the front and rear axles enhance both performance and lateral dynamics. Lower lateral tilt and reduced body roll enable an even greater degree of sporty handling.
- AMG high-performance composite brake system: internally ventilated and perforated composite 360 x 36 mm brake discs at the front axle with six-piston fixed callipers ensure even higher fade-resistance at high loads.
- AMG performance steering wheel in nappa leather/Alcantara design: the AMG performance steering wheel is an absolute pleasure to touch and further adds to the luxurious feel of the interior.

The following optional extras are available to complement the AMG performance package and are exclusive to the C 63 AMG:

- 19-inch AMG light-alloy wheels with multi-spoke styling, titanium grey and with a high-gloss finish. 235/35 tyres are fitted to the 8.0-inch rims at the front axle; the format at the rear is 9.0 x 19 and 255/30 R 19.
- AMG carbon-fibre trim: replaces the standard aluminium trim and adds a functional racing-car touch to the interior.
- AMG velour floor mats in black

More AMG than ever before

Both technologically and visually the new C 63 AMG is more distinctively different from the production C-Class than ever before. In combination with the sports functionality of the standard equipment, the saloon and estate models are unmistakable in their role as exclusive and dynamic top models.

The front end of the C 63 AMG is dominated by the new bonnet with its two pronounced power domes, as well as the trademark AMG radiator grille with a central star and two louvres with chrome inserts. The honeycomb pattern of the grille is also reflected in the large air dams of the new athletically contoured front apron, which forms part of the AMG-specific bodystyling. The front fog lamps with chrome surrounds are spaced well apart, acting together with the flared front wheel arches to accentuate the width of the car. A real eye-catcher is the striking transition from the front apron to the wings. The side air vents in the front apron serve to expel the hot air from the oil coolers. If the C 63 AMG is ordered with the optional bi-xenon headlamps or the Intelligent Light System, the headlamps are also dark-tinted.

Eye-catching features when viewed from the side include the 18-inch AMG light-alloy wheels, the harmoniously integrated "6.3 AMG" lettering on the front wing and the AMG side sill panels. At the rear, the standard LED rear lights, the AMG rear apron with its black diffuser insert and three pronounced diffuser fins, as well as the AMG sports exhaust system with two chrome twin tailpipes, provide further visual highlights that are hallmarks of the brand. The AMG spoiler lip on the boot lid (saloon only) reduces lift and ensures greater handling stability at high speeds.

Interior with new AMG sports seats and AMG performance steering wheel

This decidedly sporty theme is continued in the interior of the C 63 AMG, which now has special AMG sports seats with integral head restraints for the first time.

The seats not only feature a new design with cross-piping and AMG lettering, but also an adaptive backrest with adjustments for the side bolsters and lumbar support. The standard upholstery in ARTICO man-made leather/AMG fabric is available in a choice of black or reef grey – or as an option the interior can be further enhanced with particularly high-grade nappa leather in black, reef grey or black/sahara beige. Optimum handling control is assured with the new AMG performance steering wheel in a three-spoke design, which has a 365-mm rim diameter and a flattened lower section. The upper section is covered in perforated leather and two silver AMG shift paddles enable the gears to be shifted manually. Other AMG-specific equipment features include the aluminium-look door sill panels with embossed AMG lettering and brushed stainless steel sports pedals.

AMG main menu with a wide variety of displays

The distinctive AMG instrument cluster in a tubular design was specially designed for the C 63 AMG. It features newly styled dials, AMG-specific lettering and a new night-time design. Eye-catching details include the 320 km/h speedometer scale, AMG lettering, red needles and the "6.3 V8" logo in the rev counter. The AMG main menu in the central display allows numerous settings, with "Warm Up", "Set Up" and "RACE" modes activated via multifunction buttons on the AMG performance steering wheel. "Warm Up" displays the engine oil and coolant temperature, "Set Up" the current ESP[®] mode and the transmission mode "S", "C" or "M". "RACE" mode makes the RACETIMER available, with which the driver is able to measure lap times on a racetrack.

C 63 AMG Estate with maximum cargo volume of 1500 litres

In developing the new C 63 AMG Estate, the designers and engineers focused on customer expectations. A spacious interior, variability and functionality were afforded priority. Unlike its predecessor, the rear of the new Estate is considerably more steeply raked – an important factor that generates a larger load capacity. The capacity is 485 or 1500 litres according to the position of the 1/3:2/3 split-fold rear seat backrest (VDA measuring method). No other vehicle of the premium estate segment in this vehicle category offers so much space. The load capacity

has increased by up to 146 litres compared to its predecessor. Every aspect of the C 63 AMG Estate is suitable for everyday use. It has room for four golf bags with trolleys, for example. The largest possible cuboid measurement has increased by 66 litres to 827 litres, which exceeds other premium estates in its vehicle category by anything from 50 to 100 litres. The maximum load compartment length measures 2.82 m from the tailgate to the front-passenger footwell – an increase of 17 cm.

Easy loading: EASY PACK tailgate and load-securing kit

A series of practical details make loading the new C 63 AMG Estate even easier, more comfortable and safer. The load compartment features two bag hooks and four lashing rings for securing cargo. Standard equipment includes side stowage compartments with net covers and a collapsible shopping box as well as a combined luggage cover and safety net. The new optional EASY-PACK tailgate opens and closes at the touch of a button and with the EASY-PACK load-securing kit (optional extras) drivers have even more options for dividing the load compartment (approx. 1.80 x 1.20 m) and securing their cargo.

C 63 AMG standard equipment includes (selection):

- Adaptive brake light
- Airbags for the driver and front passenger
- Aluminium trim panels on dome, doors and centre console
- Acceleration skid control (ASR)
- Armrest with roller-top compartment
- Electrically adjustable and heated exterior mirrors
- Outside temperature display
- Brake Assist
- ADAPTIVE BRAKE system with hill-start assist
- Combined luggage cover and safety net (estate)
- Through-loading facility and armrest with double cup holder, load securing and 1/3:2/3 split-fold rear seat backrest (saloon)
- 1/3:2/3 split-fold rear seat backrest (estate)
- Shopping crate, collapsible (estate)
- 3-stage ESP®

- Headlamp Assist
- Power windows (4)
- Belt tensioners and belt force limiters for the front and outer rear seats
- Air-conditioned glove compartment
- Black roof liner
- ISOFIX child seat attachment points in the rear
- Map pocket on the rear of the driver's seat backrest
- THERMATIC two-zone automatic climate control
- Kneebag on the driver's side**
- Steering column adjustable for height and reach
- Lighting package
- Front fog lamps
- Projector-beam headlamps with halogen technology
- Tyre pressure loss warning system
- ELCODE locking system with infrared/radio remote control
- Sidebag for driver and front passenger
- Bag hooks in the boot/luggage compartment
- Cruise control with SPEEDTRONIC variable speed limiter
- Front seats electrically adjustable for height and backrest angle
- Leather selector lever
- Tinted glass
- Windowbags
- Central locking with crash sensor

** in Europe

Optional extras include:

- 19-inch AMG light-alloy wheels
- AMG performance package
- AMG carbon-fibre trim
- AMG velour floor mats
- Bi-xenon headlamps with cornering light function and headlamp cleaning system - including dark-tinted headlamps
- COMAND APS, incl. hard disc navigation, LINGUATRONIC voice control and music server, on request also with 6-DVD changer

- EASY PACK tailgate and load-securing kit (estate)
- Integrated rear child seats with side head restraints (estate)
- Intelligent Light System with five light functions - including dark-tinted headlamps
- KEYLESS-GO
- Child seat recognition in the front passenger seat
- Nappa leather upholstery
- PRE-SAFE®
- Electric rear windscreen roller blind (saloon)
- Electric tilting/sliding glass sunroof
- Sidebags in rear
- Surround-sound system
- THERMOTRONIC comfortable automatic climate control system with three-zone air conditioning
- Electrically adjustable front seats with memory function

Practical: Mercedes safety concept for every accident phase

The new C 63 AMG is the safest car in its market segment. No other vehicle in this class offers so many safety innovations and has been so uncompromisingly designed to reflect real accident scenarios as the new C-Class. The comprehensive Mercedes safety concept PRO-SAFE™ goes well beyond compliance with standard crash test regulations, taking every aspect of safe driving into account – from accident prevention with systems such as ADAPTIVE BRAKE, Brake Assist, adaptive brake lights and ESP® to occupant protection with two-stage front airbags, driver kneebag, front sidebags and windowbags. The preventive protection system PRE-SAFE® developed by Mercedes-Benz is available as an option, which makes the C-Class the only car in the world in this market segment to feature such trail-blazing safety technology. Another feature providing more driving safety is the Intelligent Light System (optional), which is offered for the first time in this vehicle class. The Intelligent Light System comprises five different light functions which are configured to typical driving and weather situations and offers the driver a much enhanced visual range.

Doing it the hard way

Creating a new car is a complex undertaking and this certainly applies to the new Mercedes-Benz C 63 AMG. Its conceptual phase started as early as 2004. This began with the fundamental feasibility study known as packaging.

The new C 63 AMG was first constructed as a digital model, the engine, cooling system, fuel system, drive train and axles being "married" with the bodyshell to examine buildability. In spring 2005 the first 1:4-scale design models were produced on the basis of drawings and computer images and, in addition, the first testing and development vehicles were already built on the basis of the preceding C 55 AMG. This made it possible to test major assemblies such as the drive train, brakes and axles. The latest onboard measuring technology provided valuable data such as engine oil, coolant and brake disc temperatures – but other aspects of interest were lap times e.g. on the north loop of the Nürburgring, as well as measurable, precisely defined handling manoeuvres to provide comparisons between different axle configurations. These tests were accompanied by extensive aerodynamic tests on the bodyshell of the C 63 AMG and it was only then that the final design was approved.

Following approval of the concept in the autumn of 2005, the first fully fledged prototypes of the C 63 AMG were built. At the same time the high-performance saloon was also produced as a digital prototype. Computer simulations made it possible for the "real" development prototypes to exhibit a very high level of maturity during the first rollout. These simulations included the most important vehicle functions, such as handling dynamics, the engine and drive train, bodyshell durability, suspension performance, passive safety, the engine's thermal characteristics and performance/fuel consumption.

The standardised and highly sophisticated AMG development and test programme for the C 63 AMG began in summer 2005. Over the next couple of years around 20 vehicles were dispatched all over the world from Mercedes-AMG GmbH in Affalterbach. The objective: strenuous tests in every climatic zone on earth

Test, analyse and optimise – that is the creed of the specialists at AMG to achieve the objectives laid down in the book of specifications. Another decisive aspect was an ongoing dialogue between Design and Development, so that any necessary technical modifications were also implemented in design terms.

The major test stages at a glance:

Development testing of the engine, transmission and drive train

- Altitude tests in Denver, Colorado (USA), Lesotho (South Africa), Mont Ventoux (France) and Granada (Spain)
- High temperature tests in Death Valley, California (USA), Upington (South Africa), Idiada proving ground (Spain) and Phoenix, Arizona (USA)
- Driving trials in Los Angeles, California (USA)
- Cold temperature tests in Arctic Falls (Sweden)

Development testing of the cooling and fuel systems

- Various driving trials on the high-speed tracks in Nardo (Italy) and Papenburg
- Trials in Upington (South Africa) and Death Valley, California (USA)
- Tests in the DaimlerChrysler wind tunnel

Development testing of the braking and control systems

- Brake testing on the high-speed track in Nardo (Italy) and the Grossglockner Alpine pass (Austria)
- Testing of dynamic control systems on the Idiada proving ground (Spain), in Arjeplog (Sweden) and on the Boxberg proving ground

In addition, various endurance trials are run with the aim of simulating the vehicle's entire lifecycle under the most severe conditions:

- **North loop of the Nürburgring:** The car's drive train, suspension, wheel location system, dynamic control systems, tyres and brakes are tested on the world's most demanding racetrack.
- **Long-term testing on different roads:** All the components and systems are tested together in everyday operation. Loaded up to their permitted gross vehicle weight, the test cars are put through a precisely defined test programme on country roads, motorways and in city traffic.
- **Endurance testing on the DaimlerChrysler proving ground in Papenburg:** Extreme acceleration and braking manoeuvres with a high proportion of full load operation, making extreme demands on the cooling and fuel delivery systems.
- **Endurance testing in the Swabian Alb region:** The vehicles are loaded up to their permitted gross vehicle weight and driven on country roads with numerous uphill and downhill gradients, placing extreme loads on the transmission and drive train.
- **"Heide" endurance testing:** (named after the poor post-war roads across the "Lüneburger Heide"): 2000 kilometres of extreme trials on the test track or on state-of-the-art test rigs. In this case the focus of the developers is on the durability of the drive train components, the entire bodyshell and the integral subframe on which the front axle, steering and engine are mounted. The test cars are loaded up to their permitted gross vehicle weight.

These tests are supplemented by extensive crash simulations and real crash tests to provide the necessary evidence for country-specific certifications without which no registration would be possible. The end result is final vehicle approval – the green light for the launch of the C 63 AMG.

Twenty years of excitement and exclusivity

As the top model of the current C-Class generation, the new C 63 AMG can look back at an impressive heritage. It has four direct predecessors (C 55 AMG, C 32 AMG, C 43 AMG and C 36 AMG), all of which are powerful AMG high-performance vehicles.

It all began with the 190 E. When this compact Mercedes saloon appeared in 1982, only four-cylinder engines were on the market. But with the launch of the six-cylinder 190 E 2.6 in 1986, AMG in Affalterbach pinpointed the potential for developing a powerful sports saloon. In 1987, exactly 20 years before the launch of the C 63 AMG, the 190 E 3.2 AMG made its first appearance.

- **190 E 3.2 AMG: the inspiration from 1987**

In 1987, AMG surprised the industry with the 190 E 3.2 AMG. Featuring an engine capacity increased by 600 cc to 3205 cc, it generated previously unknown levels of dynamism. Output increased from 54 kW/74 hp auf 172 kW/234 hp and max. torque rose to 317 Nm. Fitted as standard with a five-speed manual transmission, the performance of the 190 E 3.2 AMG was highly respectable:

7.7 seconds were needed to accelerate from 0-100 km/h; the top speed was 244 km/h (four-speed transmission: 7.6 s and 240 km/h). The AMG sports chassis with its 16-inch AMG light-alloy wheels and larger brake system proved to be the ideal partners for the powerful AMG six-cylinder engine.

- **C 36 AMG: the first result of the cooperation contract**

A milestone was reached 26 years after the company was founded: in 1993 AMG and Mercedes-Benz launched their first jointly developed and produced car – the C 36 AMG. The sports saloon with the new name was presented at the Frankfurt International Motor Show. Market launch was initially limited to Europe. The C 36 AMG was launched in America one year later.

The top model of the successful first generation of Mercedes-Benz C-Class featured a 3.6-litre in-line six-cylinder engine with two overhead camshafts and four-

valve technology. The max. output of 206 kW/280 hp was reached at 5750 rpm; the 385 Nm max. torque at 4000 rpm. The C 36 AMG accelerated to 100 km/h in 6.7 seconds, with a top speed of 250 km/h. An automatic transmission with four – later five – gears transferred power to the rear wheels. The AMG sports chassis with 17-inch AMG light-alloy wheels ensured optimum roadholding and the hall-mark Mercedes long-distance comfort; the large AMG high-performance brake system ensured premium deceleration characteristics.

By 1997, only four years after its world premiere, 5000 C 36 AMG vehicles had been sold. This first co-production was not only an economic success; it also marked an important milestone in the company's history and rapidly enhanced the profile of AMG.

- **C 43 AMG: featuring a new V8 engine and available for the first time as an estate model**

In September 1997, the successor to the C 36 AMG was presented at the Frankfurt International Motor Show: the C 43 AMG featuring a new AMG V8 engine. Boasting a 4.3-litre capacity, the eight-cylinder engine developed 225 kW/306 hp und 410 Nm torque. 0-100 km/h acceleration was achieved in 6.5 seconds and the top speed was electronically limited to 250 km/h. AMG addressed an emerging lifestyle-oriented target group by launching the C 43 AMG Estate in addition to the saloon.

The new model featured a five-speed automatic transmission. The AMG sports chassis with 17-inch AMG light-alloy wheels and the AMG high-performance brake system also contributed to optimum performance.

A highly exclusive development was the limited-production C 55 AMG. Virtually indistinguishable from the C 43 AMG to look at, the top model featured a 5.5-litre eight-cylinder engine familiar from the CLK 55 AMG and developed 255 kW/347 hp and 510 Nm torque.

- **C 32 AMG: new supercharged V6 engine with 354 hp peak output**

In 2001, Mercedes-AMG GmbH entered new territory: a new supercharged V6 engine generating 260 kW/354 hp and 450 Nm torque was developed for the C 32 AMG. The powerful six-cylinder engine was closely related technically to the 368 kW/500 hp AMG 5.5-litre supercharged V8 engine of the SL 55 AMG. Available as both a saloon and estate, the C 32 AMG was at the head of its segment in terms of peak performance and torque value, producing performance figures previously only achieved in sports cars: 0 - 100 km/h in only 5.2 seconds (estate 5.4 s), 200 km/h after 18.8 seconds (estate: 18.8 s) and a top speed of 250 km/h (electronically limited).

A further new development was the AMG SPEEDSHIFT five-speed automatic transmission with active engine-braking downshift, optimum gear function, torque converter lockup and particularly rapid gearshifting. An AMG sports chassis with 17-inch AMG light-alloy wheels and an AMG high-performance brake system ensured dynamic handling. AMG bodystyling and a full range of standard equipment added a note of dynamic exclusivity to the C 32 AMG.

- **C 55 AMG: with large-volume eight-cylinder powerhouse**

The new C 55 AMG was launched to coincide with the presentation of the new-generation C-Class in 2004. Boasting an optimised and enhanced AMG 5.5-litre V8 engine, the new eight-cylinder top model took first place in its competitive segment. 270 kW/367 hp and 510 Nm torque ensured superb vehicle performance: accelerating from 0 - 100 km/h in a mere 5.2 seconds (estate: 5.4 s), the C 55 AMG (available in both saloon and estate versions) reached a top speed of 250 km/h (electronically limited).

When it comes to visual impact, the C 55 AMG had a more athletic appearance than its predecessor. With a distinctive front end, larger track width, 18-inch AMG light-alloy wheels, new AMG bodystyling and AMG sports exhaust system with two sets of twin chromed tailpipes, the V8 model displayed what it was capable of. This was backed up by its equipment, featuring an AMG ergonomic sports steering wheel including steering-wheel gearshift, an AMG SPEEDSHIFT five-speed automatic transmission with a manual drive program, AMG sports chassis, AMG high-performance brake system and direct-transmission steering.

22,000 C-Class models made by AMG

Around 22,000 AMG high-performance versions of the Mercedes-Benz C-Class were sold between 1993 and 2007. The most important markets were the United States, Germany, Western Europe and Japan.

Global sales from the C 36 AMG to the C 55 AMG at a glance:

Model	In production	Quantity
C 36 AMG (W 202)	1993 - 1997	5400
C 43 AMG (W/S 202)	1997 - 2001	3850
C 55 AMG (W/S 202)	1999 - 2001	59
C 32 AMG (W/S 203)	2001 - 2004	8250
C 55 AMG (W/S 203)	2004 - 2007	4600

Mercedes-Benz C 63 AMG

Page 24

Engine

No. of cylinders/arrangement		8/V, 4 valves per cylinder
Displacement	Cc	6208
Bore x stroke	mm	102.2 x 94.6
Rated output	kW/hp	336/457 at 6800 rpm
Rated torque	Nm	600 at 5000 rpm
Compression ratio		11.3:1
Mixture formation		Microprocessor-controlled petrol injection, HFM

Power transmission

Drive system		Standard drive system
Transmission		AMG SPEEDSHIFT PLUS 7G-TRONIC
Ratios	Final drive	2.85
	1st gear	4.38
	2nd gear	2.86
	3rd gear	1.92
	4th gear	1.37
	5th gear	1.00
	6th gear	0.82
	7th gear	0.73
	Reverse	-3.42/-2.23

Chassis

Front axle		Three-link suspension, anti-dive, coil springs, gas-pressure shock absorbers, stabiliser
Rear axle		Multi-link independent suspension, anti-squat and anti-lift, coil springs, gas-pressure shock absorbers, stabiliser
Brake system		Disc brakes all round, internally ventilated and blind-drilled, foot-operated parking brake at rear, ABS, Brake Assist, 3-stage ESP®
Steering		Speed-sensitive rack-and-pinion steering, steering damper
Wheels		Front: 8.0 J x 18; rear: 9.0 J x 18
Tyres		Front: 235/40 ZR 18; rear: 255/35 ZR 18

Dimensions and weights

		<u>Saloon</u>	<u>Estate</u>
Wheelbase	mm	2765	2765
Track width front/rear	mm	1569/1525	1569/1525
Overall length	mm	4726	4711
Overall width	mm	1795	1795
Overall height	mm	1439	1442
Turning circle	m	11.75	11.75
Boot/luggage compartment capacity**	l	475	485 - 1500
Kerb weight acc. to EC	kg	1730	1795
Payload	kg	440	480
Perm. gross vehicle weight	kg	2170	2275
Tank capacity/reserve	l	66/8	66/8

Performance and fuel consumption

Acceleration 0 - 100 km/h	s	4.5	4.6
Top speed	km/h	250**	250**
Fuel consumption NEDC combi- ned	l/100 km	13.4	13.7

* according to VDA measuring method; ** electronically limited