



Press Information

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The new Mercedes-AMG C 63 S E PERFORMANCE

- Performance hybrid with technology derived directly from Formula 1™
- Hand-built M139I engine at the front and electric motor on the rear axle enable 671 hp combined system output
- World's most powerful series-production four-cylinder engine produces 469 hp
- AMG Performance 4MATIC+ fully variable all-wheel drive and active rear axle steering standard

Affalterbach. The new 2024 Mercedes-AMG C 63 S E PERFORMANCE brings state-of-the-art technologies derived directly from Formula 1™ to the road. A two-speed electric motor positioned on the rear axle supports the most powerful series production four-cylinder in the world, a Handcrafted AMG 2.0-liter turbocharged engine that is mounted longitudinally at the front. Power delivery and torque build-up occur spontaneously and without delay: as in Formula 1™, the electric support of the exhaust gas turbocharger eliminates the turbo lag of the combustion engine, while the electric motor at the rear axle pushes powerfully from a standstill. The electric powertrain and 400-volt high performance battery are AMG-exclusive, in-house developments. Just like in Formula 1™, the battery is specifically designed for fast power output and draw with innovative direct cooling of the cells. The performance hybrid delivers a combined system output of 671 hp and a 752 lb-ft combined system torque¹.

For the first time in a C 63, AMG Performance 4MATIC+ fully variable all-wheel drive transfers power to the road and includes a Drift Mode for even more driving pleasure. Added to this are active rear axle steering, another unique feature in this segment.

“With its performance hybrid drive and electrically assisted exhaust turbocharger, the new C 63 S E PERFORMANCE is a technological masterpiece that takes a new approach. The electrified powertrain offers a whole new driving experience. The immediate response of the electric drive at the rear axle, the rapid torque build-up as well as the fast power output and also draw of our battery are very special features. Add to this the standard-fit rear axle steering and the fully variable AMG Performance 4MATIC+ all-wheel drive with Drift Mode - the new C 63 once again illustrates the high level of technical expertise that AMG possesses.”

Jochen Hermann, Member of Executive Board – Chief Technical Officer of Mercedes-AMG GmbH.

Expressive design with powerful proportions and striking details

Form follows function: the design of the new C 63 S differs from the Mercedes-Benz C-Class in its more muscular proportions. The performance sedan is based on an extensively modified AMG bodyshell. The front end is 2 inches longer and the front fenders are wider. In terms of length, the sedan measures an extra 3.6 inches. The wider track width at the front axle results in 3.1 inches more overall width at the front. And the wheelbase has grown by 0.4 inches.

A new distinguishing feature, and one that is exclusive to the C 63 S, is the narrow air outlet in the center of the hood that transitions elegantly into the two power domes. A small but particularly fine detail: a round

¹ The combined system torque specified is a calculated theoretical value that is used for comparison purposes.

badge with a black AMG emblem replaces the Mercedes star with laurel wreath on the hood. Further typical elements include the AMG-specific radiator grille with vertical struts and the AMG front fascia with a “jet-wing” design. Two electronically controlled AIR PANELS (behind the radiator grille and in the front fascia) allow the air to be regulated as required.

Matching side skirts, rear fascia with large diffuser as well as two grooved trapezoidal twin tailpipe trims round off the design. Exclusive details at the rear include the special airflow breakaway edge on the trunk lid, integrated charging port door, and “C 63 S” model badge highlighted in red. The C 63 S is fitted standard with 19-inch AMG alloy wheels and staggered tires. Optional 20-inch wheels, also with staggered tires, are available, including an AMG forged design.

Numerous paint finishes and equipment provide further opportunities for individualization. The exterior design can be further accentuated with two AMG Carbon Fiber Packages, the AMG Night Package and Night Package Plus, and the AMG Performance Design Package.

Stylish interior, new generation AMG Performance Seats

In the interior, AMG sports seats with special upholstery and distinctive stitching pattern add refinement. Optional new second-generation AMG Performance Seats feature side bolsters with weight-saving openings that also allow for better ventilation. The shape of the backrest tapers towards the bottom.

New redesigned second-generation AMG Performance seats are available as an option. These feature side bolsters with weight-saving openings that also allow for better ventilation. The shape of the backrest tapers towards the bottom. The AMG logo is now placed between the matte chrome openings under the integrated headrest.

MBUX multimedia system with hybrid-specific displays

The MBUX infotainment system includes various AMG- and hybrid-specific displays and functions that can also be extensively personalized. These include special displays in the instrument cluster, on the portrait-orientated central multimedia display and on the optional head-up display.

The instrument cluster view can be customized with different display styles and individually selectable main views. The AMG-specific Supersport style offers the option of displaying various contents via a vertical menu structure. These include a menu with hybrid-specific temperatures or a setup menu that displays the current settings for the suspension or transmission.

The head-up display also offers AMG-specific display styles such as Race and Supersport. These can be accessed via driver display. High-quality graphics on the central multimedia display also visualize power flow of the drive system, speed, power, torque and temperature of the electric motor, as well as temperature of the AMG High Performance Battery. The time can be shown on an analog IWC chronograph.

AMG TRACK PACE, the data logger for use on the racetrack, is also integrated. The software records more than 80 vehicle-specific data ten times per second, such as speed, acceleration, steering angle and brake pedal operation while the vehicle is driven on a racetrack. There is also a display of lap and sector times as well as additional training and analysis tools.

Track-based boost strategy for the racetrack

TRACK PACE also enables intelligent distribution of electric boost to optimize lap times with targeted use of the electric motor's power. This track-based boost strategy is already stored for 30 well-known racetracks globally and will expand in the future to a total of 70 circuits.

Before starting a lap on the racetrack, the driver only has to select the track on the central display, for example the German Hockenheimring, and then switch on the boost strategy. Once the driver activates the RACE drive program, the C 63 S is ready to go. The vehicle then displays an upcoming boost sector in the driver display and the head-up display. When boost power is called up via kick-down (100 percent boost power), a countdown and a horizontal bar count down the boost seconds. Two options are available: a strategy for a particularly fast single lap ("Hot Lap") and another strategy for several consistently fast laps in succession ("Endurance Mode"). In a further expansion stage, the individual boost sectors are also shown on the multimedia display in the track view.

AMG Performance steering wheel

An AMG Performance steering wheel with its distinctive twin-spoke design and seamlessly integrated buttons are fitted standard. The two round AMG DRIVE UNIT steering wheel buttons impress with brilliant displays and allow fast and intuitive operation of various dynamic driving functions, AMG DYNAMIC SELECT drive programs and recuperation levels of the performance hybrid drive.

AMG-specific E PERFORMANCE hybrid drive: combustion engine in the front, electric motor in the rear

In the new Mercedes-AMG C 63 S E PERFORMANCE, the Handcrafted AMG 2.0-liter turbocharged engine is combined with a permanently-excited synchronous electric motor, a high performance battery developed in Affalterbach and AMG Performance 4MATIC+ fully variable all-wheel drive. The 671 hp combined system output and 752 lb-ft combined system torque² enable acceleration from 0 to 60 mph in just 3.3 seconds.

The 201 hp electric motor is positioned at the rear axle, where it is integrated with an electrically-shifted two-speed transmission and electronically controlled limited-slip rear differential in a compact electric drive unit (EDU). Experts refer to this layout as a P3 hybrid. The lightweight high performance battery is located above the rear axle. This compact design has numerous advantages:

- The electric motor acts directly on the rear axle and can therefore convert its power more directly into propulsion - for that extra boost when starting from a standstill, accelerating or overtaking.
- The inherent design of the electric motor means that full torque is available near instantaneously, making particularly agile starting possible.
- In addition, the driver immediately experiences a noticeable performance increase thanks to the integrated, electronically controlled limited-slip rear differential. The hybrid model is highly agile when accelerating out of corners and offers optimal traction.
- If wheel slip occurs on the rear axle, the drive power of the electric motor is also transferred to the front wheels as needed for more traction. The mechanical connection of the fully variable all-wheel drive makes this possible by means of a driveshaft and drive axles of the front wheels.
- The positioning on the rear axle improves weight distribution as well as axle load distribution.
- The AMG system offers very high recuperation efficiency, as the system allows only minimal mechanical and hydraulic losses from the engine and transmission.
- The automated two-speed transmission at the rear axle, with its specially calibrated gear ratio, ensures both high wheel torque for agile starting to safe continuous output at higher speeds. An electric actuator engages second gear at up to 87 mph, which corresponds to the electric motor's maximum speed of approximately 13,500 rpm.

Inspired by Formula 1™, developed in Affalterbach: the AMG High Performance battery

When the electrification strategy was being defined, it was clear from the outset that all essential components would be developed in Affalterbach. At the heart of this is the AMG High Performance Battery (HPB). The development of the lithium-ion energy storage system is inspired by technologies that have already been proven in the Mercedes-AMG Petronas F1 Team's Formula 1™ hybrid race cars. The high

² The combined system torque specified is a calculated theoretical value that is used for comparison purposes.

performance battery combines high power that called up frequently in succession with low weight to increase the overall performance of the vehicle. Added to this are the fast energy draw and high power density.

94 hp continuous output and 201 hp peak output

The high performance battery offers a capacity of 6.1 kWh, a continuous output of 94 hp and a peak output of 201 hp for ten seconds. The low weight of only 196 lbs helps to deliver the very high power density. Charging takes place via the installed 14V on-board charger with alternating current at a charging station, wallbox or household outlet. The battery is designed for fast power delivery and draw rather than longest possible range.

The continual push for innovation: direct cooling of the battery cells

Every battery needs a defined temperature for optimum power delivery. The basis for the high performance AMG 400-volt battery is its innovative direct cooling system: a high-tech coolant flows around all 560 cells and cools them individually. The result is the battery is always in a consistent, optimal, operating temperature window, no matter how often it is charged or discharged. Should the average temperature be exceeded when driving at high speeds, protection mechanisms are configured so that maximum performance can be obtained from the battery, with the temperature level subsequently lowered by direct cooling.

For the direct cooling, the AMG specialists had to develop new cooling modules that are only millimeters thick. Approximately 3.7 gallons of coolant circulate from top to bottom through the entire battery past each cell with the help of a specially developed high performance electric pump, also flowing through an oil/water heat exchanger attached directly to the battery. This conducts the heat into one of the two low temperature circuits (LT) of the vehicle. From there, it goes on to the LT radiator at the front of the car, which releases the heat into the ambient air. The system is designed to ensure even heat distribution in the battery.

The battery is always within a consistent, optimum operating temperature window averaging 113 degrees Fahrenheit, no matter how often it is charged or discharged. Should the average temperature be exceeded when driving at high speeds, protection mechanisms are configured so that the maximum power can be drawn from the battery in order to subsequently lower the temperature level again through direct cooling.

Operating strategy: electric power always available

The basic operating strategy is derived from the hybrid powerpack of the Mercedes-AMG Petronas Formula 1 race car. As in the top class of motorsport, maximum propulsion is always available when the driver accelerates aggressively – for example, to accelerate powerfully out of corners or when overtaking. The electric power can always be called on and frequently reproduced via high recuperation performance and needs-based recharging.

Eight AMG drive programs

The eight AMG DYNAMIC SELECT drive programs "Electric," "Comfort," "Battery Hold," "Sport," "Sport+," "RACE," "Slippery" and "Individual" are precisely tailored to the new drive technology and offer a wide range of driving experiences. The drive programs adjust important parameters such as response of the drive system and transmission, steering characteristics, suspension damping and sound. The boost power of the electric motor also depends on the respective drive program. In all drive programs, the peak power of the electric motor can be easily called up via the accelerator pedal. The haptic accelerator pedal provides a tangible pressure point that the driver's foot must overcome.

- **"Electric":** The focus is on the electric driving experience. All-electric driving takes place from a standstill up to 78 mph, while the combustion engine remains switched off. The mechanical connection to the AMG Performance 4MATIC+ components means that all-wheel drive is always available. If the rear wheels lose grip, the power of the electric motor is also transmitted to the front wheels via the driveshaft and axles. If the battery runs down or the driver requests more power, the intelligent operating control automatically switches to the "Comfort" driving mode and the combustion engine starts up and almost imperceptibly takes over the drive power.

- **"Comfort"**: Starting off takes place mostly in electric mode. The combustion engine and electric motor then run as the situation demands – with electric drive at low speeds, for example during city driving. During highway driving the vehicle operates as a hybrid. The maximum boost power of the electric motor is approximately 25 percent. Overall, the result is a harmonious and efficiency-optimized driving experience, thanks in part to the early upshifts of the AMG SPEEDSHIFT® MCT 9G transmission. Suspension and steering are set up for an emphasis on comfort.
- **"Battery Hold"**: As in the "Comfort" driving mode, the combustion engine and electric motor run based on the driver demand with a maximum boost of approximately 25 percent. The biggest difference is the operating strategy keeps the battery state of charge constant. For example, if the battery is at 75 percent charge, it remains in this range in "Battery Hold." The use of the electric motor is then limited and optimized for low power draw, which is compensated for by recuperation. Drivers can decide when to make full use of the battery power again, simply by changing the drive program.
- **"Sport"**: starting off with combustion engine and electric motor and interaction of the two drives based on the situation. More boost from the electric motor is enabled, up to approximately 65 percent. More agile accelerator response, shorter shift times, earlier downshifts, as well as a more dynamic suspension and steering setup provide a sporty driving experience.
- **"Sport+"**: Start-off with combustion engine and electric motor and situational interaction of the two drives. Even higher boost performance of up to 80 percent is enabled. Extremely sporty character with even more agile throttle response as well as targeted torque intervention during upshifts, with cylinder deactivation for optimum shift times. Increased idle speed for faster starting. An even more dynamic setup for the suspension, steering and powertrain.
- **"RACE"**: For highly dynamic driving on closed courses and racetracks. All parameters are configured for maximum performance. Starting off with the combustion engine and electric motor and situational interaction of the two drives. Electric boost power of the electric motor up to 80 percent. Strong battery recharging at low power demand for maximum energy availability. In addition, the "Boost Mode" can be called up via the left steering wheel button. The boost power is then limited to a maximum of 30 percent to conserve energy reserves. These can be used on the racetrack for spontaneous power demand via kick-down and 100 percent boost power for powerful acceleration.
- **"Slippery"**: Optimally tuned for slippery road conditions, with reduced power input and boost, as well as a flat torque curve. Electric-only driving and recuperation adjustment are deactivated.
- **"Individual"**: Individual customization of the drive, transmission, AMG DYNAMICS, chassis, steering and exhaust system.

New sound experience

When driving on all-electric power, the acoustic vehicle alert system informs others the AMG C 63 S E PERFORMANCE is approaching. A specially composed, low-frequency and speed-modulated AMG sound is emitted to the outside via a speaker at the front and a soundbar with two speakers at the rear. The sound can also be heard at a subdued level in the interior, as acoustic feedback. The system is active up at speeds up to approximately 18 mph. Above this speed, the sound fades out harmoniously. Drivers can experience the electric driving sound at higher speed ranges by selecting the sound via the corresponding button on the steering wheel (identifiable by the frequency wave symbol).

In addition, AMG developers also use the external speakers for a more advanced sound experience. For this purpose, they pick up the real sound of the combustion engine via a pressure sensor in the exhaust system and enrich it further before it's emitted in the interior via the vehicle's multimedia sound system, thus making it possible to experience the signature AMG sound. In addition, the sound signature is modulated via the external speakers. The intensity depends on the selected drive program. It can, however, also be set individually via the central touchscreen or the AMG DRIVE UNIT buttons.

Performance hybrid drive can precisely control traction

The control of vehicle dynamics also benefits from the hybrid drive. Instead of braking intervention by ESP® (Electronic Stability Program), the electric motor can also control traction as soon as a wheel signals too much slip. To achieve this, the intelligent control system reduces the drive torque of the electric motor, which is transmitted to the wheel via the limited-slip rear differential. As a result, ESP® does not have to throttle the combustion engine, enabling the engine to be operated at higher torque. This improves agility and the otherwise reduced power can be used to charge the battery.

Recuperation selectable in four stages

Because the high performance battery is always in the optimum temperature window of approximately 113 degrees Fahrenheit due to direct cooling, recuperation can also be optimized. Normally, a battery heats up strongly at a high recuperation rate so the energy recovery level needs to be limited. Recuperation starts when the driver takes their foot off the accelerator pedal. The driver can select four different levels of recuperation using the right-hand AMG steering wheel button, with the energy recovery being designed differently according to the driving mode.

- **Level 0:** The vehicle behaves similarly to a conventional combustion-engine model with a manual transmission, where the clutch is disengaged, and coasts with the least resistance when the accelerator is released. The recuperation level is very low, and only serves to maintain the vehicle's power supply. With the combustion engine switched off, friction losses in the drivetrain are reduced to a minimum.
- **Level 1:** This is the standard setting, at which recuperation is already noticeable to the driver, and corresponds approximately to the deceleration of a conventional combustion engine when the clutch is engaged.
- **Level 2:** Stronger recuperation, the brake pedal hardly needs to be used when driving in traffic.
- **Level 3:** Maximum energy recovery, making so-called "one-pedal" driving possible much like an all-electric vehicle. Depending on the driving conditions, more than 100 kW of power can be fed back into the battery.
- **Special feature of the RACE drive program:** On the racetrack, the driver wants to squeeze the maximum time possible out of any braking action. In the "RACE" drive program, recuperation is automatically set at level 1 to allow the most predictable vehicle behavior possible at the limits.

Handcrafted AMG 2.0-liter engine with electric exhaust gas turbocharger

The Handcrafted AMG 2.0-liter four-cylinder engine was developed entirely at the company's headquarters in Affalterbach and is manufactured there according to the "One Man, One Engine" principle. In doing so, Mercedes-AMG combines the craftsmanship of its highly qualified employees with the modern production methods of "Industry 4.0" and a high degree of digitization.

The closed deck design of the M139I ensures high rigidity at low weight. This enables peak combustion pressures of up to 2,300 psi. The areas around the cylinders are largely closed, and the cover plate is only pierced by smaller channels for the coolant and engine oil. Another outstanding feature of the engine is the two-stage gasoline injection. In the first stage, particularly fast and precise piezo injectors deliver the fuel into the combustion chambers at pressures of up to 2,900 psi. The second stage adds intake manifold duct injection with solenoid valves, which is needed to achieve the engine's high power output.

The high output also necessitates a sophisticated cooling system that can cool the cylinder head and crankcase to different temperature levels. This makes it possible to maintain a cold cylinder head for maximum power with efficient ignition timing, along with a warm crankcase to reduce internal friction. The cylinder head is cooled by a mechanical high performance water pump; the crankcase is cooled by a second, electrically driven water pump. After a cold start, this pump remains passive until the engine has warmed up. In operation it is regulated by the engine control unit so that the crankcase is always cooled according to need.

The M139l is the world's first series-production engine with an electric exhaust gas turbocharger. The innovative electric exhaust gas turbocharger is derived directly from the technology used by the Mercedes-AMG Petronas F1 Team in the premier class of motorsport. The new form of turbocharging guarantees particularly spontaneous response across the entire rpm range. This leads to an even more dynamic driving experience, while at the same time increasing efficiency. Compared to the AMG C 43 Sedan, the turbocharger in the AMG C 63 S E PERFORMANCE is significantly larger enabling a higher airflow rate and thus more power. In addition, the integrated electric motor is powered by the 400-volt high voltage system (48-volt system in the C 43 Sedan).

The functional principle of the electric exhaust gas turbocharger in detail

A 1.6-inch thin electric motor is integrated directly on the shaft of the turbocharger between the turbine wheel on the exhaust side and the compressor wheel on the intake side. This directly drives the shaft of the turbocharger and is electronically controlled, accelerating the compressor wheel before the exhaust gas flow takes over the drive in a conventional manner.

This significantly improves the response directly from idle speed and across the entire rpm range. The combustion engine responds more spontaneously to accelerator pedal input, while the overall driving feel is significantly more responsive. In addition, the electrification of the turbocharger enables higher torque at low rpms, which increases agility and optimizes acceleration from a standstill. Even when the driver lifts off the accelerator or brakes, the technology is able to maintain boost pressure at all times to ensure a continuously direct response.

The electric exhaust gas turbocharger operates at speeds of up to 175,000 rpm. The turbocharger, electric motor and power electronics are connected to the combustion engine's cooling circuit to create an optimal temperature environment at all times.

The most powerful production four-cylinder in the world

In the C 63 S E PERFORMANCE, the M139l engine produces 469 hp at 6,750 rpm. This makes it the most powerful series-production four-cylinder in the world. 402 lb-ft of torque is available at 5,000 – 5,500 rpm. A belt-driven starter generator (RSG) combines the alternator and starter in one component and is integrated into the 400-volt high-voltage system. The RSG starts the combustion engine and ensures the basic supply of the ancillary components such as air conditioning or driving lights.

Engine power is transmitted via the AMG SPEEDSHIFT® MCT 9G transmission (Multi-Clutch Transmission), in which a wet start-off clutch replaces the torque converter. It reduces weight and, thanks to its lower inertia, optimizes response to accelerator pedal input, especially during sprints and load changes. The extensively tuned software ensures extremely short shift times as well as fast multiple downshifts if required. In addition, the double-declutching function in the "Sport" and "Sport+" drive programs deliver a particularly expressive shifting experience. The RACE START function ensures optimal acceleration from a standstill.

AMG RIDE CONTROL suspension with Adaptive Damping System

The standard AMG RIDE CONTROL steel sprung suspension with Adaptive Damping System combines sporty driving dynamics with a high level of long-distance comfort. The basis for this is provided by the front axle with specially developed steering knuckles and supporting joints for the spring link, as well as by the rear axle, which also features elastokinematics designed for dynamic handling. Based on this, the damping at each individual wheel is continuously adjusted to the current demand – always taking into account the preselected suspension level, the driving style and the condition of the road surface. In addition to an improvement in ride quality and comfort, this leads, above all, to an increase in driving safety. There is a choice of three different damping maps ("Comfort," "Sport" and "Sport+").

Three-stage AMG parameter steering and standard rear axle steering

The three-stage AMG speed-sensitive steering system features a variable steering geometry ratio that adapts to the selected drive program. At high speeds, the steering power assistance decreases; at low speeds it is steadily increased. As a result, comparatively little steering effort is required at low speeds, as well as when maneuvering and parking, while the best possible control over the vehicle is maintained when driving at speed. In the “Sport” and “Sport+” suspension settings, the steering wheel also provides significantly more feedback to the driver.

The standard rear axle steering operates with a maximum steering angle of 2.5 degrees. At speeds up to 60 mph the rear wheels turn in the opposite direction to the front wheels (variable depending on the AMG DYNAMICS setting). This leads to a virtual shortening of the wheelbase, which in turn results in significantly more agile turn-in, less steering effort and improved maneuverability. At speeds above 60 mph (variable depending on the AMG DYNAMICS setting), the rear wheels turn in parallel to the front wheels – up to a maximum of 0.7 degrees. This virtual extension of the wheelbase has a positive effect on driving stability, leads to a faster build-up of lateral force when changing direction and thus to a more direct reaction of the vehicle to steering commands. The response of the rear axle steering depends on the selected AMG DYNAMIC SELECT driving mode.

AMG DYNAMICS

The integrated AMG DYNAMICS dynamic control system is also standard on the C 63 S E PERFORMANCE. It influences the control strategies of ESP® (Electronic Stability Program), all-wheel drive system and the electronically controlled limited-slip rear differential. This enhances the stabilizing functions of ESP® with interventions to add agility to the steering characteristics and additional ESP® functions. When cornering at speed, for example, brief braking intervention at the inner rear wheel generates a defined yawing moment around the vertical axis for responsive and precise turn-in.

- **“Basic”** applies to the “Comfort and “Electric” drive programs and results in a very stable ride with high yaw damping.
- **“Advanced”** is activated in the “Sport” drive program. The vehicle remains neutrally balanced. The reduced yaw damping and increased agility support dynamic driving.
- **“Pro”** is part of the “Sport+” drive program. In “Pro,” the driver receives even more assistance for dynamic driving maneuvers, while agility and feedback from the road when cornering is further enhanced.
- **“Master”** is integrated with the “RACE” drive program and is designed for use on closed courses and racetracks. “Master” offers a slightly oversteering vehicle balance, more direct steering and more agile turn-in. To activate “Master,” the driver must use the separate button in the center console to switch ESP® to ESP® SPORT handling mode or ESP® OFF.

In the “Individual” drive program, drivers can select the “Basic,” “Advanced,” “Pro” or “Master” AMG DYNAMICS calibration.

Good control and fade-resistant: the AMG high performance composite brake system

In keeping with the extreme output figures and the associated performance, the AMG high performance composite brake system with 6-piston fixed calipers at the front and single-piston floating calipers at the rear is fitted as standard. The brake system impresses with short braking distances as well as maximum stability and fade-resistance under heavy use.

Technical data

Mercedes-AMG C 63 S E PERFORMANCE

Hybrid system		
Layout		P3: combustion engine at the front, electric motor at rear axle
Combined system output	hp	671
Combined system torque ³	lb-ft	752
Battery capacity	kWh	6.1 (4.8 usable)
Engine		
No. of cylinders/arrangement		4/inline
Displacement	cc	1,991
Engine output	hp	469 at 6,750 rpm
Engine torque	lb-ft	402 at 5,000 – 5,500 rpm
Compression ratio		9.0:1
Mixture formation		Combined direct gasoline injection and intake manifold injection, turbocharging via electric exhaust gas turbocharger
Electric motor		
Type		Permanently excited synchronous motor
Electric motor output	hp	203
Electric motor torque	lb-ft	236
Drivetrain		
Drive configuration		AMG Performance 4MATIC+ fully variable all-wheel drive
Transmission		AMG SPEEDSHIFT® MCT 9G (automatic w/ wet multi-disc start-off clutch)
Gear ratios		
1 st /2 nd /3 rd /4 th /5 th /6 th /7 th /8 th /9 th	:1	5.35/3.24/2.25/1.64/1.21/1.00/0.87/0.72/0.60
Reverse	:1	4.80
Suspension		
Front axle	AMG RIDE CONTROL suspension with aluminum double wishbones, anti-squat and anti-dive control, lightweight coil springs and stabilizer bar, Adaptive Damping System	
Rear axle	AMG RIDE CONTROL suspension with aluminum double wishbones, anti-squat and anti-dive control, lightweight coil springs and stabilizer bar, Adaptive Damping System	
Brake system	Hydraulic dual-circuit brake system; front 15.4 x 1.4-inch internally ventilated and perforated brake discs, 6-piston aluminum fixed caliper; rear 14.6 x 1-inch internally ventilated and perforated brake discs, 1-piston aluminum floating caliper; electric parking brake, ABS, Brake Assist, 3-stage ESP®	
Steering	Electromechanical speed-sensitive power steering with rack and pinion system, variable steering ratio (13.1:1 at center), variable power assistance	
Standard wheel size	Front: 9.5 x 19; Rear: 9.5 x 19	
Standard tire size	Front: 265/40 R19; Rear: 275/40 R19	
Dimensions and weights		
Wheelbase	in	113.2
Front/rear track	in	64.9/61.9
Length/width/height	in	190.6/80(74.8 without mirrors)/57.4
Turning circle	ft	39.7
Curb weight	lbs	4,817
Performance		
Acceleration 0-60 mph	s	3.3 (est.)
Top speed	mph	155 / 174 with AMG Performance Design Package (electronically limited)

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³ The combined system torque specified is a calculated theoretical value that is used for comparison purposes.

About Mercedes-Benz USA

Mercedes-Benz USA (MBUSA), headquartered in Atlanta, is responsible for the distribution, marketing and customer service for all Mercedes-Benz products in the United States. MBUSA offers drivers the most diverse lineup in the luxury segment with 18 model lines ranging from the sporty GLA SUV to the flagship S-Class and the dynamic all-electric vehicles from Mercedes-Benz. MBUSA is also responsible for Mercedes-Benz Vans in the U.S. More information on MBUSA and its products can be found at www.mbusa.com and www.mbvans.com.

Accredited journalists can visit our media site at media.mbusa.com.

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