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World premiere of the Mercedes-Benz GLC (USA: MY2016 GLC300 RWD and 4MATIC go on sale at U.S. dealers in November 2015)

#### **Press Information**

17 June 2015

# Second generation marks a big step forward

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The descriptions and information in this press kit is preliminary and may apply to the international model range of Mercedes-Benz and may vary from country to country. All efforts have been made to make sure the material is applicable to the US market for journalists based in the USA, however some details may be subject to change ahead of the November 2015 market launch of the MY2016 GLC300 and GLC300 4MATIC models.

## An SUV that fits the bill to perfection

Stuttgart/Metzingen. The second generation of the mid-size Mercedes-Benz SUV has been renamed from GLK to GLC, and this versatile SUV represents a big step forward on several fronts. On a technical level, the GLC clearly makes its mark with the excellent standard of safety that is a brand hallmark, featuring state-of-the-art assistance systems. The AIR BODY CONTROL multichamber air suspension is unparalleled in this segment, offering the combination of DYNAMIC SELECT engine and suspension modes together with 4MATIC permanent all-wheel drive. This increases both ride comfort and agility, regardless of driving surface. Visually, the body follows the clear and sensual design idiom which was demonstrated so successfully by the GLC Coupé showcar concept in Spring 2015, and which also serves as the standard for future SUV families.

"Our new GLC represents a further, systematic step in the implementation of our successful SUV philosophy. It combines the ultimate in driving comfort with a sporty touch, impresses on the road and – more than ever – off it as well, and appeals to the eye with the new design and equipment line," says Thomas Weber, member of the Management Board of Daimler AG and responsible for Group Research and Mercedes-Benz Cars Development.

The design philosophy behind the new GLC essentially favors sensual purity and a modern aesthetic over the classic off-road look. The dynamic design exudes emotional appeal while also employing purist forms. Surfaces embodying a degree of tension and precise lines cite the clear design line followed by all state-of-the-art SUVs from Mercedes-Benz. The GLC represents a departure from its progenitor-the G-Class – but only in terms of appearance. On a technical level, it sets new benchmarks in all disciplines, and the mid-size SUV's off-road capabilities remain as outstanding as ever.

The characteristic SUV front with a short, succinct overhang, upright, three-dimensional radiator grille with a twin louver and centrally positioned brand star follows the successful new design line. Striking headlamps, optionally available as LED High Performance lamps, lend the GLC a self-confident look which is further

emphasized by their distinctive night design. The USA receives standard front and rear bumpers optimized for off-road use with a 28 degree angle of approach/departure for all variants.

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The side view showcases the almost coupe-like greenhouse, which together with the 4.6 inch (118 millimeter) larger wheelbase lends the GLC an elegant long profile. This impression is further reinforced by the gently sloping dropping line, which is a hallmark of the brand, and by the powerful shoulders. The rising lower feature line also enlivens the vehicle's side view. Matte black cladding in the wings, wheels up to a size of 20 inches (50.8 cm) and the optional side running board provide clear indications of the GLC's off-road credentials.

The rear is characterized by the broad, muscular shoulders, the horizontal orientation of the contour lines and the split LED rear lamps featuring a distinctive night design. By integrating all the antennae into the exterior mirrors and the roof spoiler, it has been possible to do away with the fin which was previously featured on the roof.

#### GLC interior: added class

The paradigm shift in the area of design affects not only the outside appearance. The model change also signals a marked upgrade for the interior. A modern setting prevails, which is reminicent of the standard set by its bigger brother, the GLE. The new design idiom combines sensual purity with dynamic sportiness and embodies a new interpretation of modern luxury. The GLC's interior conjures up the feel-good atmosphere which is a brand hallmark courtesy of high-class materials featuring a hand-crafted character, such as nappa leather or open-pore wood trim, meticulously finished details and an appealing overall touch and feel. Last but not least, substantially more space is available for occupants and luggage. The optional large-area panoramic glass roof further enhances the light and airy feel inside.

A key focus of the totally new interior design is the dashboard and the center console with its flowing lines and large, one-piece panel performing an elegant sweep from the center air vents to the armrest. These clear-cut lines create a feeling of open space and establish a purist, modern vibe. The newly developed innovative touchpad in the handrest over the rotary pushbutton nestles ergonomically in the center console. As on a smartphone, this provides for very

simple and intuitive operation of all the head-unit functions using finger gestures. The touchpad also permits letters, numbers and special characters to be entered in handwriting. A centrally positioned media display is partially integrated above the center console. Five round air outlets with a metallic "cool touch" effect lend the dashboard a sporty air and create an interesting contrast to the warm look of the other materials.

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#### More space, more fun, more comfort

In comparison to its predecessor, the new model is substantially more spacious for front and rear occupants alike. The increase in the GLC's length in comparison to the previous model has been translated effectively into useful interior space.

Almost all key comfort factors have been improved – substantially in some instances – above all the space on the rear bench.

Entry and exit space for the rear passengers has also been substantially enhanced; with 1.3 inches (34 millimeters) more foot space now available for the purposes of entering and exiting the vehicle.

Through the effective use of space and intelligent packaging, the engineers have also managed to increase the size of the luggage compartment with level a load area. The rear bench features a 40/20/40 split and offers a cargo position which increases the load capacity by locking the backrests at a steeper angle. *In terms of non-SAE interior volume specs based on European figures*, the load capacity behind the rear bench increases by 2.8 to 3.9 cubic feet (80 to 110 liters), to a total of up to 20.5 cubic feet (580 liters). In all, the GLC is able to transport up to 56.5 cubic feet (1600 liters) of cargo – 1.8 cubic feet (50 litres) more than was previously possible. The maximum luggage compartment length is 52.0 inches (1320 millimeters), while the maximum width increases by 5.9 inches to 43.3 inclues (1100 millimeters).

Added convenience for loading and unloading is provided by lowering of the load compartment sill by 1.6 inches (40 mm) with the AIR BODY CONTROL option and by HANDS-FREE ACCESS, which enables the tailgate to be opened automatically by performing a swiping movement with the foot under the bumper.

Mercedes-Benz has applied an extensive package of measures to enhance the GLC's energy efficiency and performance substantially. New drive systems, outstanding aerodynamics and intelligent lightweight design are the primary factors behind the vehicle's fuel efficiency. In the United States, the GLC 300 and GLC 300 4MATIC will be powered by a 2.0 liter inline 4 cylinder engine. The preliminary data shows that this fuel efficient powerplant will produce 241 hp @ 5,500 rpm and 273 lb-ft of torque @ 1,300-4,000 rpm.

The design transition has also bestowed superlative aerodynamics on the new GLC. With a global Cd value of 0.31 (GLK 0.34) and total aerodynamic drag of 0.794 (GLK 0.87), it sets a clear benchmark in this segment (NOTE: this is a global aerodynamics figure, which is TBD for the U.S. market and related larger standard wheels, which will differ). Apart from the vehicle's substantially more aerodynamically efficient basic shape, this exceptional aerodynamic performance also results from a host of solutions relating to points of detail, such as sealing of the radiator and headlamp surrounds, a radiator shutter, the extended roof spoiler or the optimized underbody panelling.

Despite markedly larger outer dimensions, a longer wheelbase and a more extensive scope of equipment, the vehicle's weight has been cut by 176 pounds (80 kilograms). The main contributory factor to this reduction is the totally new body, which is 110 pounds (50 kilograms) lighter than the smaller GLK counterpart, thanks to an intelligent mix of materials comprising aluminium and high- to ultrahigh-strength steels. Aluminium components additionally reduce the weight of the chassis, which also benefits ride comfort due to the attendant reduction in unsprung masses. The optional AIR BODY CONTROL full-support multi-chamber air suspension features spring elements in lightweight yet robust glass-fiber-reinforced plastic, which reduce the system weight in comparison to conventional air suspensions. The use of the new compact transfer case as an add-on module and the 9G-TRONIC with its magnesium transmission housing both result in a reduction in weight of 26 pounds (12 kg) in comparison to the previous model.

The new GLC features the AGILITY CONTROL suspension with steel springs and a variable damping system as standard. The GLC is the sole model in this market segment to offer the option of fitting the chassis with a full-support multi-chamber air suspension system and electronically controlled, continuously adjustable damping. The AIR BODY CONTROL suspension combines excellent driving stability and sporty agility with optimum comfort and outstanding off-road capabilities. Specific characteristics are pre-selected according to the settings of the DYNAMIC SELECT driving dynamics program. In Sport+ mode, the GLC's occupants feel as if they are sitting in a sports car with a high level of lateral dynamics due to the tauter connection of the chassis, which is additionally lowered by 0.6 inches (15 millimeters). Comfort mode offers the very opposite ride experience, focusing on particularly comfortable running with soft connection of the chassis. To ensure maximum driving safety in this mode, the spring and damper forces adapt within 60 milliseconds in response to sudden evasive manouvers. Further benefits of the system include reduced rolling during cornering, automatic level control and lowering of the load compartment sill for convenient loading and unloading.

#### Powertrain: agility, dynamism and comfort à la carte

The new GLC offers the DYNAMIC SELECT handling control system with five driving programs as standard. The ECO, COMFORT, SPORT, SPORT+ and INDIVIDUAL settings will be familiar to drivers from other Mercedes-Benz models.

4MATIC permanent all-wheel drive models feature a basic drive torque split of 45 to 55 percent between front and rear axle. In cooperation with the ESP®, ASR and 4ETS dynamic handling control systems, this provides for superior and clearly predictable handling. The multiple-disc clutch in the center differential assists the system in the event of really low friction coefficients between tire and road, for example on snow or ice. A basic locking force of 37 lb-ft (50 newton-meters) between the front and rear axles brings about a significant increase in traction with the same high level of driving stability.

The nine-stage 9G-TRONIC automatic transmission also comes as standard equipment on the GLC300 and GLC300 4MATIC for the USA. Depending on the mode selected for the DYNAMIC SELECT dynamic handling control, the automatic

transmission with a torque converter boasts great agility and responsiveness or poised composure. The potential of the transmission is maximized to offer an impressively high shift speed and perfect transitions for energetic sprinting as well as gentle, barely perceptible gear changes for enjoyable cruising.

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#### Mercedes-Benz Intelligent Drive: guardian angels on board

Almost all of the driver assistance systems which are familiar from the C-, E- and S-Class are available for the new GLC. As part of the Intelligent Drive concept, these systems combine data from various sensor technologies to substantially enhance comfort and safety. COLLISION PREVENTION ASSIST PLUS, Crosswind Assist, Active Highbeam Assist and ATTENTION ASSIST are on board as standard. The Driver Assistance Package (same for all S/E/C/CLS/GLE models in the USA) provides an even more comprehensive scope of active safety features, comprising DISTRONIC PLUS with Steering Assist, PRE-SAFE® Brake with pedestrian detection, BAS PLUS with Cross-Traffic Assist, Active Blind Spot Assist, Active Lane Keeping Assist and PRE-SAFE® PLUS. The latter feature also offers added protection in the event of a rear-end collision. By means of a radar sensor in the rear bumper PRE-SAFE® PLUS identifies impending rear-end collisions, alerts the traffic behind by operating the hazard warning lights at a particularly eye-catching flashing frequency, activates preventive occupant protection measures and brakes the vehicle to a standstill after a rear-end collision to reduce the levels of stress acting on the occupants. On vehicles equipped with the LED Intelligent Light System, Adaptive Highbeam Assist Plus allows main beam to be left on permanently by masking out the area of the main-beam light cone which is occupied by other vehicles. Simpler handling and a clearer view when manoevering in tight spaces or driving in dense urban traffic are ensured by the 360° camera, which is able to show the vehicle and its surroundings from different perspectives, and by Active Parking Assist, which manoevers the vehicle fully automatically into detected parallel and end-on parking spaces.

The improved ergonomics and simpler controls in the GLC also help to enhance safety. All important vehicle functions and settings can be carried out intuitively using the central rotary pushbutton or the touchpad. The desired settings or information are visualized by the large, partially integrated color media display in the middle of the dashboard. Direct selection buttons next to the light switch

module to the left of the steering wheel additionally enable direct activation of the

most important assistance systems.

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Also new is the Head-up Display, (HUD). The HUD displays important information

directly in the driver's field of vision on the front windscreen, thus providing for

clear legibility and less distraction from the road ahead. The system provides

information on speed, posted speed limits, navigation instructions and messages

from the DISTRONIC system.

Airbag & co.: cushioning protection for the occupants

In keeping with the Mercedes-Benz tradition, the body forms the foundation for

exemplary crash safety. A high-strength safety passenger compartment forms the

core of this concept. It is surrounded by specifically designed and field-tested

deformation zones, which ensure maximum safety for the occupants by virtue of

optimized force paths and a combination of die-cast aluminium components and

ultra-high-strength materials.

In addition to 3-point safety belts with pyrotechnical and reversible belt tensioning

and belt-force limitation for driver, front passenger and those in the outer rear

seats, numerous airbags serve to protect the vehicle's occupants in an accident.

These include the combined thorax/pelvis sidebags for driver and front passenger

and a newly developed windowbag extending over both seat rows, the optional

sidebags for the outer rear seats and a driver kneebag.

The front passenger seat can additionally be fitted with automatic child seat

recognition, which dispenses with the previous transponder in favor of a weight

mat. This enables any child seat to be used. The airbag is automatically deactivated

when a child seat is fitted and reactivated once it has been removed.

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# The full spectrum: model range and equipment (prelim U.S. info)

In the United States, the GLC 300 and GLC 300 4MATIC are the launch powertrain choices, with others to follow in 2016 and 2017. The GLC300 models will be powered by a 2.0 liter inline 4 cylinder engine. The preliminary data shows that this fuel efficient powerplant will produce 241 hp @ 5,500 rpm and 273 lb-ft of torque @ 1,300-4,000 rpm.

The basic equipment on the all-new GLC already includes numerous details adopted from higher vehicle categories. Pioneering assistance systems such as COLLISION PREVENTION ASSIST PLUS, Crosswind Assist, Active Highbeam Assist, ATTENTION ASSIST or an ESP® system with Dynamic Cornering Assist all feature as standard. The optional latest-generation Driver Assistance Package further reduces the driver's workload while enhancing safety for the passengers, with facilities including DISTRONIC PLUS with Steering Assist, PRE-SAFE® Brake with pedestrian detection, BAS PLUS with Cross-Traffic Assist, Active Blind Spot Assist, Active Lane Keeping Assist and PRE-SAFE® PLUS.

The scope of delivery for the GLC also includes the DYNAMIC SELECT dynamic handling control system with the five driving programs INDIVIDUAL, SPORT, SPORT+, COMFORT and ECO.

The customer has an extensive range of options when it comes to configuring their GLC. The base range covers nine standard and metallic paints and three *designo* paint finishes in MAGNO Dakota Brown, Diamond White, and design Cardinal Red, plus wheels up to a size of 20 inches (50.8 cm). The AMG Line comes with with 19-inch wheels, radiator grille with twin louvers and chrome inserts, AMG bumpers with a chrome-plated underguard, two chrome-plated tailpipes, polished aluminium trim and roof rails in anodized aluminium.

The GLC can additionally be combined with the Night Package, including exterior mirror housings and front and rear underguards in high-gloss black, window frames

in a polished black finish, roof rails in matte black, 19-inch (48.3 cm)/optionally 20-inch (50.8 cm) wheels, heat-insulating dark-tinted glass from the B-pillar rearwards and chrome louvers in the radiator grille

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Other optional items include the large-area panoramic glass roof with electric roller sunblind, aluminium-look running boards with rubber studs, LED Intelligent Light System, EASY-PACK tailgate with HANDS-FREE ACCESS.

For the interior, there is a choice of various combinations in MB-Tex, leather or nappa leather in black, silk beige, espresso brown, saddle brown and platinum white pearl (*designo* only). Standard wood trim is brown linden wood with distinctive dark vertical black lines, with optional trims for the USA being black open-pore ash, burl walnut wood in high-gloss brown or a black piano-lacquer look.

The GLC offers excellent infotainment for its occupants as standard equipment, courtesy of a large 7-inch (17.8 cm) color media display and Audio 20 USB sound system with Frontbass. In combination with a smartphone with a data option, the system is already internet-capable and further incorporates a Bluetooth® handsfree system. In conjunction with Garmin MAP PILOT, Audio 20 CD becomes a navigation system, integrated into the on-board electrical system. Concert hall music quality is offered by the Burmester sound system.

A choice of design and equipment lines is also available for the interior:

Two different designo lines are available:

- designo interior two-tone: Seats in two-tone platinum white pearl/black designo nappa leather with contrasting topstitching, trim in black openpore ash in the center console and longitudinal-grain aluminium in the doors
- designo interior black: Seats in black designo nappa leather, trim in highgloss brown linestructure lime

Interesting and popular options for the interior include multi-color ambient lighting, the AIR-BALANCE package with ionization and fragrancing, a heated multifunction steering wheel, the heated front seats with fully electric adjustment, and heated rear seats.

# More space, more fun, more comfort

In comparison to its predecessor, the new GLC is substantially more spacious for front and rear occupants alike. The increase in the size of the GLC in comparison to the previous model has been translated effectively into useful interior space.

Almost all key comfort factors have been improved – substantially in some instances – above all the space on the rear seats. An impressive amount of legroom – the space between the front seat backrests and the rear seat – is now available, following a very sizeable increase of 2.2 inches (57 millimeters).

More space is also available for the front occupants, who benefit from a generous increase in shoulder and elbow room. By means of intelligent packaging and perfect seat geometry, the interior designers from the Mercedes-Benz Technology Center (MTC) have even managed to conjure up 2.2 inches (57 millimeters) of additional space here - although the vehicle's width has only grown by 2.0 inches (50 millimeters).

Comparison of GLOBAL dimensions in inches (mm), not including SAE rated interior dimentions):

	GLK	GLC	Δ
Basic body dimensions			
Wheelbase	108.5 (2755)	113.1 (2873)	+4.6 (+118)
Track front/rear	62/62.9	63.9/63.7	+1.9/+0.8
	(1574/1597)	(1621/1617)	(+47/+20)
Length	178.6 (4536)	183.3 (4656)	+4.7 (+120)
Width	72.4 (1840)	74.4 (1890)	+2.0 (+50)
Height	64.2 (1630)	64.5 (1639)	+0.3 (+9)

Another comfort criterion - entry and exit space for the rear passengers - has also been increased substantially, with 1.3 inches (34 millimeters) more foot space now available for the purposes of entering and exiting the vehicle.

Through the effective use of space and intelligent packaging, the engineers have also managed to increase the size of the luggage compartment with a level load area and its attendant utility value substantially.

Added convenience for loading and unloading is provided by lowering of the load compartment sill in conjunction with the AIR BODY CONTROL option and by HANDS-FREE ACCESS, which enables the tailgate to be opened automatically by performing a swiping movement with the foot under the bumper.

#### NVH: no noise, no vibration, no harshness

In order to assess the aeroacoustics, which represent the crucial comfort parameter particularly at higher speeds, the development engineers examined the GLC's psycho-acoustic properties. In addition to the high-frequency wind noise, the low-frequency components and, in particular, speech intelligibility are considered and optimized here. In their development work, the engineers devoted special attention to the air flow around the body of the vehicle, the sealing systems at doors and windows and the bodyshell. The focus in this work is not solely on the absolute sound pressure level (dB(A)). Rather, the onus is on creating the most homogeneous, harmonious possible overall acoustics. This means that neither certain frequency ranges nor individual components or areas of the vehicle must be allowed to play a dominant role. From a speed of around 75 mph (120 km/h), wind noise is the dominant acoustic factor, while tire and engine noise play a less important role. A comparison with the E-Class shows how successfully the aeroacoustics engineers have "tuned" the GLC. The wind noise index, WI - a dimensionless figure to classify aeroacoustic quality - is at the same pleasant level in both objective and subjective terms.

In addition to an increase in the vehicle's overall rigidity, another key focus of development work was on connection of the chassis and drive system to the body, as high introduction rigidity of the mounting points is essential in order to tune the bearing elements to minimize the noise level. The development engineers at the Mercedes Technology Center have pulled out all the stops here and achieved a further marked reduction in noise and vibration. In addition to the aeroacoustic

 Low noise input into the interior as a result of the intelligent use of sprayable acoustic compositions in the body-in-white, major assemblies compartment partition made of fibre-reinforced plastic with absorber, firewall insulation with high-quality injection moulded component

Rigid front-end design with diagonal struts and a new front module concept consisting of an extruded section and cast aluminium/plastic consoles with additional struts. To date, this design has only been applied for cabriolets, which entail special requirements in this area.

- Rigid cockpit cross-member consisting of high-strength magnesium alloy
- Electromechanical Direct-Steer system with optimized housing rigidity and body connection reduces steering and tire noise.
- Highly sound-absorbent acoustic windscreen, acoustic front side windows optionally available
- Three-point engine mounting damps decrease vibration and reduce the forces introduced into the body
- Body floor with reinforced tunnel, additional beading and reinforcements in the area of connection of the transmission; reduces tire noise and eliminates vibration of the main floor and the attendant noise radiation
- High rigidity of the rear area due to the use of cast aluminium components
- Reduction in unsprung masses as a result of weight-optimized aluminium components and the use of glass-fibre-reinforced spring elements when AIR BODY CONTROL air suspension is fitted
- Minimal torsional vibration due to centrifugal pendulum and double turbine damper (9G-TRONIC automatic transmission)

### Dynamism, agility and ride comfort à la carte

Featuring a totally new chassis and suspension, the new GLC clearly surpasses its predecessor's performance. Numerous design measures have led to a further improvement in suspension and ride comfort accompanied by excellent driving dynamics and agility. Key measures here include the switch from a three-link to a four-link front suspension, the increased track width at front and rear and the larger tire sizes of up to 20 inches (50.8 cm). The elastokinematics have also been optimized and the use of numerous aluminium components on the front axle and the five-link rear axle has resulted in weight savings while at the same time enhancing stability.

The GLC offers an AGILITY CONTROL suspension with steel springs and variable damping system as standard, optionally available with an emphasis on sporty performance, comfort or off-road performance:

#### AIR BODY CONTROL with ADS Plus: innovative air travel

The GLC is the sole model in this market segment to offer the option of fitting the chassis with a full-support multi-chamber air suspension system and the electronically controlled, continuously adjustable adaptive damping system ADS Plus. This configuration combines excellent driving stability and sporty agility with optimum comfort and outstanding off-road capabilities. Specific characteristic are pre-selected according to the settings of the DYNAMIC SELECT driving dynamics program.

Comfort mode offers the very opposite ride experience, focusing on particularly comfortable running with a soft connection of the chassis. To ensure maximum driving safety in this mode, the spring and damper forces adapt within 60 milliseconds in response to sudden evasive manoevers. Sport increases the sporty settings for springs and dampers, and ride height is lowered. Finally, in SPORT+ mode the GLC's occupants feel as if they are sitting in a sports car with a high level of lateral dynamics due to the tauter connection of the chassis, which is additionally lowered by 0.8 inches (20 millimeters).

Further benefits of AIR BODY CONTROL include reduced rolling during cornering, automatic level control and lowering of the load compartment sill for convenient loading and unloading.

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#### A perfect fit: DYNAMIC SELECT

The new GLC offers the DYNAMIC SELECT handling control system with five driving programs as standard:

- ECO places the emphasis on energy-efficient driving, with sailing function and ECO display in support of the most fuel-efficient driving style
- COMFORT well-balanced driving program, with comfortable suspension tuning, fuel-efficient set-up for the drive system
- SPORT more direct response of engine and automatic transmission and a
  more progressive steering characteristic support a sporty driving style,
  additionally taut, sporty suspension configuration in conjunction with AIR
  BODY CONTROL and ADS Plus
- SPORT+ even more direct response for maximum longitudinal and lateral dynamics
- INDIVIDUAL configuration of the driving experience according to
  personal preferences, within the bounds of combinations providing for safe
  and effective driving dynamics The COMFORT, SPORT and ECO settings for
  drive system, suspension and steering can be activated and combined
  according to personal preferences.

All DYNAMIC SELECT programs are visualized on the central media display.

# 4MATIC permanent all-wheel drive: the prime mover for excellent driving dynamics

The nine-stage 9G-TRONIC automatic transmission also comes as standard on the GLC300 and GLC300 4MATIC. Depending on the mode selected for the DYNAMIC SELECT dynamic handling control, the automatic transmission with torque

converter boasts great agility and responsiveness or poised composure. It offers an impressively high shift speed and perfect transitions for energetic sprinting as well as with gentle, barely perceptible gear changes for enjoyable cruising.

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The development engineers have fully revised the design of 4MATIC permanent all-wheel drive in combination with 9G-TRONIC. In contrast to the former configuration, the single-stage transfer case is no longer integrated into the automatic transmission, but rather flange-mounted on the 9G-TRONIC as a separate system. This "add-on" solution combines the advantages of both concepts and results in increased efficiency. The new all-wheel-drive powertrain features the same compact design as with the previous, integrated solution, offers 37 lb-ft (50 newton meters) of pre-lock torque and allocates the drive torque to the front and rear axles with a 45:55 split via a planetary differential. The add-on design also offers the following advantages:

- Enhanced performance use of particularly torquey engines possible
- Separate oil circuits lubricant properties tailored specifically to the
   9G-TRONIC and the transfer case, resulting in less wear and enhanced
   NVH comfort as a result of reduced friction loss
- Weight advantage magnesium housing of the 9G-TRONIC is retained with the add-on solution, resulting in weight savings of around 26 pounds (12 kilograms) for the overall system compared to the integrated variant with aluminium housing which was employed on the previous model.
- Improved system efficiency as a result of the reduced weight, the lower friction loss, the broad gear ratio spread of the 9G-TRONIC and the resultant longer axle ratios

#### Intelligent lightweight design for slimline results

A key factor behind the GLC's economic efficiency is the weight-shedding program that the vehicle has undergone. Despite markedly increased exterior dimensions, a longer wheelbase and a broader scope of equipment, the vehicle's weight has dropped by 176 pounds (80 kilograms). The main contributory factor here is the totally new hybrid material body, which introduces innovative lightweight design into volume production. As a result of the intelligent mix of materials spanning aluminium, high- to ultra-high-strength steels and robust plastic, the foundation of the GLC is 110 pounds (50 kilograms) lighter than its substantially smaller predecessor - while at the same time rigidity has been increased for excellent handling, noise and vibration comfort has been optimized and crash safety has been further enhanced.

The following aluminium components are used:

- Front wing, hood and roof panelling
- Front: Front end (extruded aluminium section), crash boxes, frames for fitting headlamps, cooling system and hood closing system
- Shock absorber strut consoles (die-cast aluminium) to house the front struts
- Rear area with shock absorber strut consoles, cross-members and longitudinal members (die-cast aluminium)
- Door hinges
- 4x4 integral support for front axle and steering, rear axle carrier
- Suspension: Four-link front suspension with spring link, strut rod, upper wishbone and steering knuckle (forged aluminium), five-link rear axle and wheel carrier (forged aluminium). This lowers the weight of the rear axle by 11 pounds (5 kilograms), while also improving its stability.

Weight-shedding measures also apply to the air suspension elements of the AIR BODY CONTROL system, which consist of glass-fibre-reinforced plastic. The aluminium and plastic components of the chassis and suspension not only reduce the weight but also enhance ride comfort as a result of the attendant reduction in unsprung masses.

Other weight advantages result from the 4MATIC all-wheel-drive powertrain with the nine-stage automatic 9G-TRONIC featuring a magnesium housing. Weight savings of around 26 pounds (12 kilograms) are attained here. Highly robust body components made of plastic are also used. The front major assembly compartment partition is one such component.

# Streamlined transition (US aerodynamics will differ due to larger standard wheel sizes)

The design transition has also bestowed superlative aerodynamics on the new GLC, which sets a clear benchmark in this SUV class with a Cd value of 0.31 (GLK 0.34) and total aerodynamic drag of 0.794 (GLK 0.87). Apart from the vehicle's substantially more aerodynamically efficient basic shape, this exceptional aerodynamic performance also results from a host of solutions relating to points of detail:

- Cooling air controlled according to installed engine variant, with ring-type shutter
- Improved sealing of the radiator section and flow properties to make efficient use of the available cooling air
- Streamlined design of the front and rear aprons
- Sealed headlamp surrounds
- Three-dimensional front wheel spoilers with patented slotted wheel arch linings for optimized air flow around the wheels
- Aeroacoustic and aerodynamic design of the A-pillar
- Extended roof spoiler with optimized flow properties and joint seals

 Aerodynamically optimized underbody with extensive engine compartment and underbody paneling

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Aerodynamically optimized wheels and tires

Key topic: Safety

### SUV stands for safety and responsibility

Virtually all of the driver assistance systems which are familiar from the C-, E-, S-, CLS-, and GLE-Class are available for the new GLC. As part of the Intelligent Drive Concept, these systems combine data from various sensor technologies to enhance comfort and safety substantially. COLLISION PREVENTION ASSIST PLUS, Crosswind Assist, Adaptive Highbeam Assist, and ATTENTION ASSIST are on board as standard. The Driving Assistance Package provides an even more comprehensive scope of active safety features, comprising DISTRONIC PLUS with Steering Assist, PRE-SAFE® Brake with pedestrian detection, BAS PLUS with Cross-Traffic Assist, Active Blind Spot Assist, Active Lane Keeping Assist and PRE-SAFE® PLUS. The latter also offers added protection in the event of a rear-end collision. Through a radar sensor in the rear bumper, it is able to detect an impending rear-end collision and initiate special protection measures and warning functions.

#### The key functions of the assistance systems on board the GLC

#### Comfort-oriented assistance

 DISTRONIC PLUS with Steering Assist - helps to keep the vehicle in its lane and is capable of following tailbacked traffic in semi-autonomous mode

#### Safety - linear guidance

- COLLISION PREVENTION ASSIST PLUS can help to prevent rear-end collisions
- BAS PLUS can also detect crossing traffic and pedestrians and boost the braking power applied by the driver, thereby reducing the severity of an accident

 PRE-SAFE<sup>®</sup> Brake - can detect pedestrians, avoid collisions with pedestrians or stationary vehicles by means of autonomous braking at vehicle speeds of up to 30 mph (50 km/h) and reduce the severity of collisions at speeds of up to 45 mph (72 km/h)

#### Safety - towards the rear

 PRE-SAFE® PLUS - can detect impending rear collisions, initiate PRE-SAFE® occupant protection measures when a rear collision is imminent and lock the brakes of the stationary vehicle in a rear collision in order to reduce the loads acting on the occupants and to avoid secondary collisions

#### Safety - lateral guidance

 Active Kane Keeping Assist - can detect oncoming traffic and whether the adjacent lanes are occupied, and prevent the vehicle from leaving its lane unintentionally by applying the brakes on one side

#### Safety - at night

- Adaptive Highbeam Assist Plus allows the main-beam headlamps to be kept on permanently without dazzling traffic by masking out other vehicles in the beams' cone of light.
- Off-road lights specific off-road headlamp settings for broader illumination of the terrain ahead, improve orientation in off-road terrain

#### Safety during parking and manoeuvring

 Active Parking Assist - can manoeuvre into and out of parallel and end-on spaces with automatic steering

#### Driver attentiveness and fitness

 ATTENTION ASSIST - can warn of inattentiveness and drowsiness in an extended speed range from 37 to 125 mph (60 to 200 km/h) and inform the driver about their level of drowsiness and how long they have been driven since their last break In addition to Active Parking Assist, simpler handling and a clearer view when manoeuvering in tight spaces or driving in dense urban traffic are ensured by the 360° camera, which is able to show the vehicle and its surroundings from different perspectives. Functions of the 360° camera in detail:

- The virtual bird's-eye view shows an aerial view of the GLC and the surrounding area three meters to the front and rear and 8.2 feet (2.5 meters) to the sides of the vehicle.
- Display of perspectives which are not actually physically possible. For
  example, when manoevering in a parking garage with a low ceiling a bird'seye view of the GLC and its surroundings are shown from a height of over
  9.8 feet (3 meters), although the ceiling is actually only a few inches above
  the vehicle.
- Visualization of the sides of the vehicle and its surroundings to avoid knocks to the exterior mirrors or the wheel rims, for example.
- Visualization of obstacles below the vehicle's belt line, which are not visible to the driver.
- Visualization of crossing traffic in front of and behind the vehicle when manoeuvering out of tight parking spaces or in tight exits.
- Visualization of pedestrians on the pavement when manoeuvring out of tight parking spaces or in tight exits.
- Support when travelling off-road in demanding terrain.
- The color of the GLC on the COMAND display always corresponds to the vehicle's actual paintwork.

#### Relaxed driving experience

The improved ergonomics and simpler controls in the GLC compared to its predecessor also help to enhance safety. All important vehicle functions and settings can be carried out intuitively using the central rotary pushbutton or the touchpad. The desired settings or information are clearly visualized by the large,

partially integrated color media display in the middle of the dashboard. Direct selection buttons next to the light switch module to the left of the steering wheel additionally enable direct activation of the most important assistance systems.

Also new is the Head-up Display (HUD). The HUD displays important information directly in the driver's field of vision on the front windscreen, thus providing for clear legibility and less distraction from the road ahead. The system provides information on speed, posted speed limits, navigation instructions and messages from the DISTRONIC system.

#### Hybrid body: the safe foundation

In keeping with the Mercedes-Benz tradition, the body forms the foundation for exemplary occupant protection in the event of a crash. A high-strength safety passenger compartment forms the core of this concept. It is surrounded by specifically designed and crash-tested deformation zones, which ensure the best possible safety for the occupants by virtue of optimized force paths and a combination of die-cast aluminium components and ultra-high-strength materials. This assures the new GLC of the potential to put in an excellent showing in all the worldwide rankings. The measures in detail:

- Highly robust passenger compartment consisting of high-strength and ultra-high-strength sheet steel, tailored blanks (sheet steel with graduated wall thicknesses) and cast aluminium components
- Bodyshell structure whose front and rear can absorb energy with purposeful deformations
- Large deformation zone of the front due to a subframe that absorbs additional energy in an accident
- Several parallel load paths for improved load distribution in partial frontal collision (offset crash)
- Additional strut made of high-strength steel between the damper dome and windscreen cross-member on the driver's side which distributes the load from forces in the upper side member plane and reduces steering and pedal intrusion in the footwell.

- Additional firewall supports between the front and outer longitudinal members, which prevent the front wheel from intruding into the footwell in a severe offset frontal collision
- Extruded aluminium profile cockpit cross-member between the A-pillars
- Doors with reinforcement profile
- Main floor with massive tunnel reinforcement and now continuous floor side members
- Rear seat base with additional reinforcements, separated from the rear floor
- Composite rear structure with longitudinal floor members in graduated plate thicknesses and a corresponding rear centre section

#### Airbags & co.: cushioning protection for the occupants

Three-point seat belts with pyrotechnical belt tensioners and belt force limiters are installed for driver, front passenger and passengers on the outer rear seats. The center seat of the second row is equipped with a standard 3-point belt system. A rear seat-belt status display in the instrument cluster informs the driver whether the passengers in the back have fastened their seat belts. ISOFIX child seat anchorage points on the outer rear seats ensure safe attachment of appropriate child seats with additional anchorage points at the top of the rear seat backrest. For the USA, the front passenger seat is fitted with automatic child seat recognition, which dispenses with the existing transponder and instead works with a weight mat. This enables any standard child seat to be used. The airbag is automatically deactivated in this case and reactivated once the child seat has been removed.

In addition, a host of airbags provides occupant protection in an accident. These include:

 A newly developed windowbag in the area of the roof between the A-, Band C-pillars for the head area of the driver, front passenger and passengers in the outer rear seats  Combined thorax/pelvis sidebags for driver and front passenger, which are able to provide additional protection in the event of a side impact. Optional sidebags for the outer rear seats.

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- Kneebag for the driver to protect the knees and stabilize the upper body,
   which positively influences occupant movement in an accident.
- Adaptive airbags for driver and front passenger with two-stage staggered deployment, depending on the detected severity of the impact and seat position.

The new GLC is equipped with mbrace, for which an emergency call can be made automatically or manually. It is triggered automatically after deployment of one of the pyrotechnic belt tensioners or airbags in the vehicle. The service center then establishes voice communication with the vehicle. If there is no response, it immediately alerts the nearest rescue service.

#### Best possible protection for more vulnerable road users

Mercedes-Benz attaches priority to the protection of more vulnerable road users, such as pedestrians or cyclists. The hood is lifted by 3.1 inches (80 millimeters) in certain accident situations, creating additional deformation space. Under the hood the package has been further optimized with a new engine cover and deformable air intake, creating yet more deformation space. These measures ensure that the GLC meets the markedly more stringent Phase 3 requirements of Euro NCAP pedestrian protection for European models (USA data from NHTSA or IIHS are forthcoming at a later date after crash tests have occurred).

BAS PLUS warns when pedestrians are detected in the danger zone by the stereo multi-purpose camera. The PRE-SAFE® Brake with pedestrian protection triggers autonomous braking when the system detects a pedestrian in the danger zone and the driver does not react to the system's warnings. This pedestrian detection, in conjunction with the optionally available Driver Assistance Package represents a milestone in preventing accidents with pedestrians and/or reducing their consequences.

With the introduction of the new GLC, Mercedes-Benz has broken completely new ground in the mid-size SUV segment. To this end, a compact 4-question interview with each of the 4 protagonists from the Development, Design, Safety and Marketing business units.

#### Dr Uwe Ernstberger, Head of the S-/E-/C-Class Product Group

Dr Ernstberger, the new GLC has an impressive new design line. Does the vehicle's technology live up to what its form promises?

"Modern lightweight construction, the best aerodynamics in its class and innovative drive systems make the GLC a real champion in the field of energy efficiency. I would point out that our GLC 350 e, which emits just 60 g/km of CO<sub>2</sub>, is one of the most efficient plug-in hybrids in the entire SUV sector. At the same time, the unique AIR BODY CONTROL, the DYNAMIC SELECT transmission modes and the 4MATIC permanent all-wheel drive increase not only the ride comfort, but also the vehicle's agility - whatever the surface it's driving on."

So, in terms of the new GLC's driving dynamics, where exactly do its strengths lie? Is it more of a cross-country vehicle or a sporty shooting brake?

"Obviously the GLC is not designed to be able to outperform our G-Class off road or to get the better of the Mercedes-AMG CLS on the "Nordschleife" of the Nürburgring. It occupies a very self-assured position between these two extremes and offers very well-balanced performance potential, both on and off the road."

What highlights of the GLC give it the edge when it ventures off the beaten track?

"We have quite literally taken off-road capability to a new level in this market segment. The GLC has a ground clearance of up to almost 0.9 inches (23 millimeters). The maximum angles of approach and departure are 31 and 25 degrees respectively. "

Why this focus on the off-road properties, which are not put to use very often?

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Gorden Wagener, Head of Design at Daimler AG

Mr Wagener, the style of the new GLC is a far cry from the more angular design of its

predecessor. What was the thinking behind this new approach?

"Like all new Mercedes-Benz products, the GLC is representative of our successful

'Sensual Purity' design philosophy. In evolving the GLC's design, the focus was on

the paradigm shift from angular lines to a modern interpretation of luxury. The

exterior design in particular, with its sensual surfaces combined with clearly defined

feature lines and expressive proportions, demonstrates how the new style of the

GLC exudes not only intelligence, but also emotionality."

Like the GLC Coupé concept presented so successfully in the spring, does the new

GLC essentially announce the shape of things to come for the entire SUV portfolio?

"All forthcoming SUVs will follow our design philosophy of Sensual Purity and take

on a markedly sportier character. And, like the GLA and the new GLE Coupé, they

will embody the modern luxury of our brand."

What are the functional benefits of this paradigm shift in design?

"At Mercedes-Benz, intelligence always goes hand-in-hand with emotion. With our

design philosophy, the GLC generates emotional appeal while at the same time

displaying a marked increase in functionality. The high-quality interior now offers

substantially more space for the occupants and their luggage while also boasting

fine materials and exuding a progressive sportiness."

On the subject of the interior, it's an all-new world here as well, isn't it?

"With its modern design idiom, the GLC also showcases our passion for the SUV

genre through the sporty character of its interior. The finest materials, authentic

trim and innovative infotainment systems conjure up a hallmark Mercedes-Benz

luxury setting. The GLC's occupants experience a level of modern luxury never

before seen in this vehicle class."

Daimler Communications, 70546 Stuttgart/Germany Mercedes-Benz - A Daimler Brand

#### Thomas Merker, Head of Safety

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Mr Merker, we all know that the best accident is the one that never happens. What is the GLC able to offer to prevent collisions?

"In developing the GLC, we have continued to pursue the Intelligent Drive concept which unites the different on-board sensor technologies and so puts the driver assistance systems in a position to identify and defuse potentially hazardous situations in good time. On top of this, the Driving Assistance package Plus, which is already familiar from the C-, E- and S-Class models, reinforces accident prevention to an even greater degree. A case in point is PRE-SAFE® PLUS, which can now also defuse looming rear impacts."

Is that not a contradiction - ever lighter vehicle bodies and ever greater passive safety?

"The bodyshell of the GLC is significantly larger and yet 110 pounds (50 kg) lighter than the predecessor model. Nevertheless, the level of passive safety has increased again. That may sound like a contradiction at first, but, having conducted comprehensive analyses, we took measures such as replacing heavy steel components with aluminium ones which are able to deliver a higher degree of protection, yet weigh less. In addition, we increased the proportion of ultra high-strength steel which weighs the same as before yet also offers greater protection. When building a safety body, everything depends on an appropriate mix of materials - what we refer to as intelligent lightweight construction."

But if a collision should occur, what measures have you taken to provide the occupants with the best possible protection?

"Occupant protection is provided in part by the body structure, comprising a highstrength occupant compartment and specific deformation zones at the front and rear which are able to absorb impact energy. Matched to this is the entire restraint system with up to nine airbags (some of which are adaptive) and the belt systems."

Is the GLC the safest SUV in this vehicle category?

"As with all Mercedes-Benz vehicles, we have designed the passive safety features of the GLC on the basis of real-world accident profiles. This philosophy provides the foundation for passing all the national and international crash rating tests with the best score."

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#### Matthias Lührs, Head of Sales and Product Marketing, Mercedes-Benz Cars

Mr Lührs, Mercedes-Benz is continuously expanding its SUV range - the new GLC brings the number of models to six now. Are there no overlaps here - what is the role of the new GLC?

"Our SUV models do not compete with each other, they complement each other optimally. From the compact GLA to the legendary G, the range allows SUV customers to find the ideal model to match their personal vision. And the new GLC provides a new point of interest in the mid-size SUV segment below our best-selling GLE."

When will the GLC be available - can you tell us anything about the prices yet?

"The GLC will be available in Europe from mid-September, to be followed successively by the other markets (MY2016 GLC300 and GLC300 4MATIC launches at US dealers in November 2015 with pricing TBD but at similar levels to the GLK).