

**Technical training.**  
**Product information.**

## **G15 Body**



**BMW Service**

Edited for the U.S. market by:  
**BMW Group University**  
**Technical Training**

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# General information

## Symbols used

The following symbol is used in this document to facilitate better comprehension or to draw attention to very important information:



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Contains important safety information and information that needs to be observed strictly in order to guarantee the smooth operation of the system.

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## Information status: June 2018

BMW Group vehicles meet the requirements of the highest safety and quality standards. Changes in requirements for environmental protection, customer benefits and design render necessary continuous development of systems and components. Consequently, there may be discrepancies between the contents of this document and the vehicles available in the training course.

The information contained in the training course materials is solely intended for participants in this training course conducted by BMW Group Technical Training Centers, or BMW Group Contract Training Facilities.

This training manual or any attached publication is not intended to be a complete and all inclusive source for repair and maintenance data. It is only part of a training information system designed to assure that uniform procedures and information are presented to all participants.

For changes/additions to the technical data, repair procedures, please refer to the current information issued by BMW of North America, LLC, Technical Service Department.

This information is available by accessing TIS at [www.bmwcenternet.com](http://www.bmwcenternet.com).

## Additional sources of information

Further information on the individual topics can be found in the following:

- Owner's Handbook
- Integrated Service Technical Application
- Aftersales Information Research (AIR)

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# G15 Body

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# G15 Body

## 1. Introduction

### 1.1. Overview



BMW 8 Series Coupé

The new BMW 8 Series Coupé with development code G15 is completely new model for BMW.

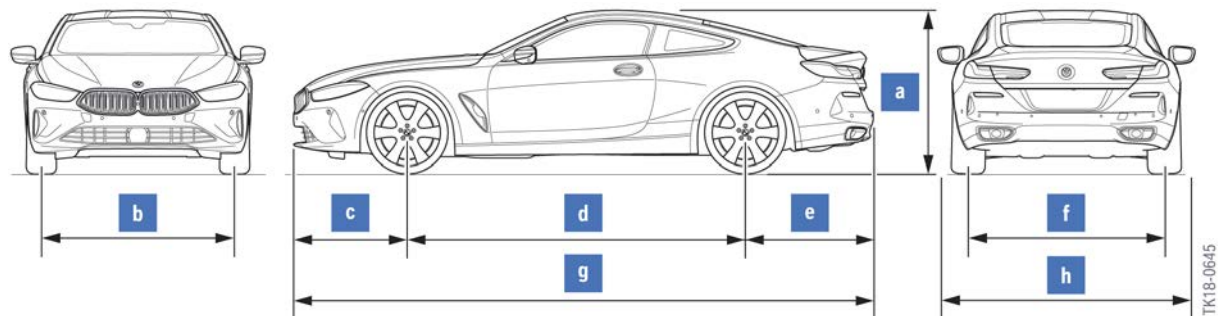
- BMW M850i xDrive.

The M850i xDrive comes standard with an 8-speed automatic transmission, Integral Active Steering, Electric Roll Stabilization, Adaptive M Suspension Professional, M Sport Brakes, M Sport Differential and the xDrive all-wheel drive which is already familiar from the G12.

Compared to the F13, its proportions are considerably more sporty. Despite the low vehicle height, the headroom at the front is on a par with its predecessor. To achieve the extremely flat outline, neither a roof aerial nor a tilt and slide or panoramic glass sunroof is available.

### 1.2. Dimensions and comparison of outlines

The exterior dimensions of the G15 in the European version are shown below.

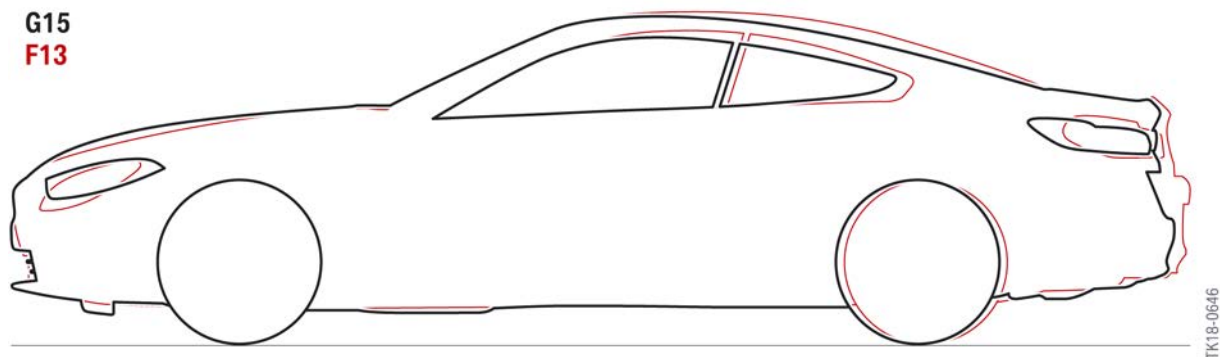


G15 outer dimensions

# G15 Body

## 1. Introduction

Index	Explanation	Unit	BMW M850i xDrive
a	Vehicle height	[mm]	1346
b	Front track width, basic wheels	[mm]	1627
c	Front overhang	[mm]	958
d	Wheelbase	[mm]	2822
e	Rear overhang	[mm]	1076
f	Rear track width, basic wheels	[mm]	1642
g	Vehicle length	[mm]	4856
h	Vehicle width excluding/including exterior mirrors	[mm]	1902/2137



Silhouette comparison of G15/F13

The following table shows the most important data of the G15 and compares this directly with the F13.

Explanation	Unit	BMW M850i xDrive	BMW 650i xDrive	Difference
Vehicle height	[mm]	1346	1369	-23
Front track width, basic wheels	[mm]	1627	1600	+27
Front overhang	[mm]	958	941	+16
Wheelbase	[mm]	2822	2855	-33
Rear overhang	[mm]	1076	1098	-22
Rear track width, basic wheels	[mm]	1642	1665	-23
Vehicle length	[mm]	4856	4894	-38
Vehicle width including exterior mirrors	[mm]	2137	-	—
Shoulder room, front	[mm]	1454	1445	+9
Shoulder room, rear	[mm]	1192	1263	-71
Elbow room, front	[mm]	1534	1531	+3

# G15 Body

## 1. Introduction

Explanation	Unit	BMW M850i xDrive	BMW 650i xDrive	Difference
Elbow room, rear	[mm]	1185	1338	-180
Maximum headroom, front	[mm]	987	1017	-30
Luggage compartment capacity	[l]	420	460	-40

### 1.3. Weights and payload

The vehicle curb weights as per DIN and the payloads of the G15 in the European version are set out in the following table.

Model	Unit	Vehicle curb weight	Payload
BMW M850i xDrive	lbs	4478	772

### 1.4. Models

The G15 will be available at market introduction with the following models.

Model	Engine	Displacement [cc]	Power output [kW (HP)]	Torque [Nm (lb-ft)]
BMW M850i xDrive	8-cylinder engine	4395	390 (523)	750 (553)

#### 1.4.1. BMW M Performance

BMW M Performance model is the only one available for the US market.

# G15 Body

## 1. Introduction

### Exterior equipment



**M PERFORMANCE**

TK18-0647

BMW M850i xDrive exterior trim

### Equipment range, exterior trim:

- Larger air inlets
- Front spoiler (spoiler edge)
- Components in the color "Cerium Grey":
  - Frame and longitudinal bars of the kidney grille
  - Exterior mirror caps
  - Model identification on rear
  - Air breather
  - Tailpipe trims
- Tailpipe trims with exclusive geometry
- Exclusive light-alloy wheel in "Cerium Grey metallic"
- M Sport braking system (19")
- M identification on front side panel
- M rear spoiler in vehicle color

# G15 Body

## 1. Introduction

### Interior equipment



BMW M850i xDrive interior equipment

### Equipment ranges, interior equipment:

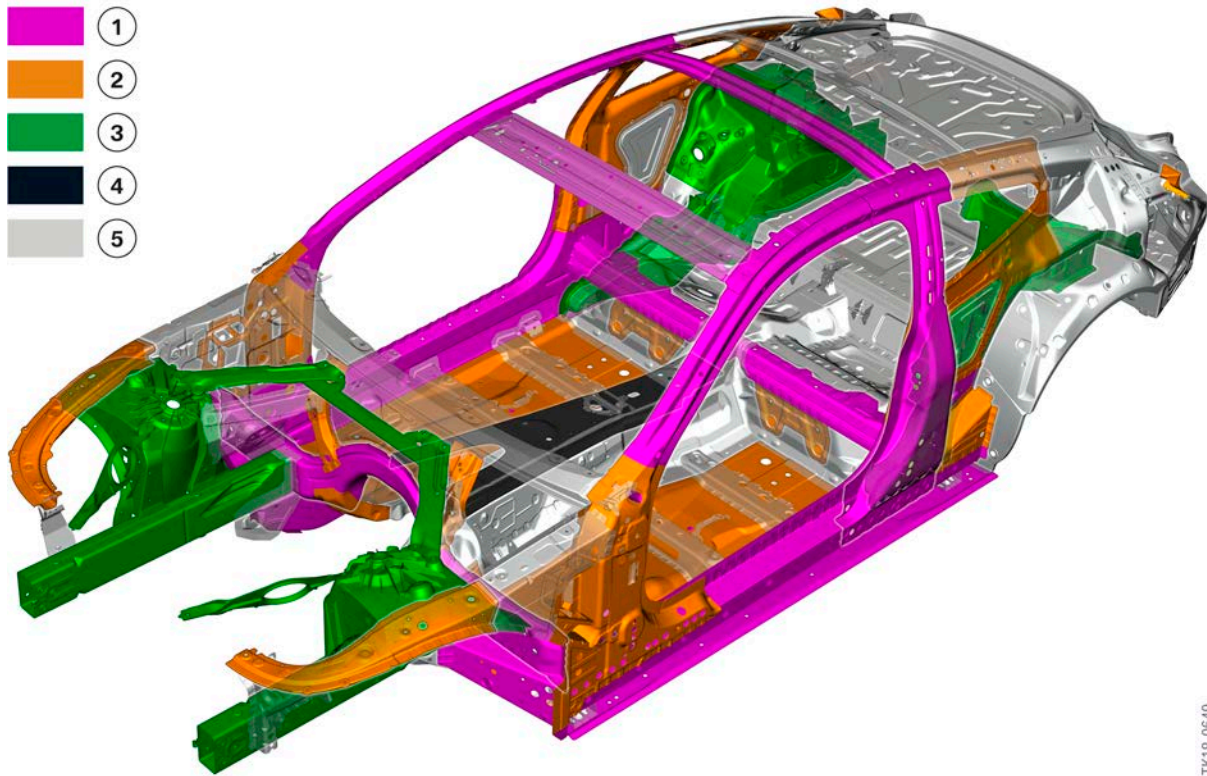
- Illuminated door sill cover strip with model identification
- Instrument cluster with digital model identification
- M Sport package:
  - Multifunction seats, front
  - M footrest and M pedals
  - Exclusive interior trim finishers
  - Headliner in anthracite
  - M leather steering wheel
  - ID transmitter with M stripe
  - Specific floor mats with edge stitching

TK18-0648

# G15 Body

## 2. Bodyshell

### 2.1. Body structure



TK18-0649

G15 material overview, body structure

Index	Explanation
1	Ultra-high strength hot-formed steel (> 900 N/mm <sup>2</sup> )
2	Multiphase steel (> 300 N/mm <sup>2</sup> )
3	Aluminium
4	Carbon
5	Other steel

The lightweight body concept of the G15 envisages components made of high-strength hot-formed steel, aluminium and carbon. Thanks to the material mix, the materials are able to contribute their specific strengths to the vehicle in the best possible way.

The number of aluminium components (die-cast and extruded profiles) has increased considerably. In contrast with the F13, the engine supports, rear side members and spring strut domes are now made of aluminium. In addition to the G12 and the G30, the G15 now belongs to the 3rd series in which structural components made of aluminium are used in the rear end.

# G15 Body

## 3. Exterior Equipment

### 3.1. Overview



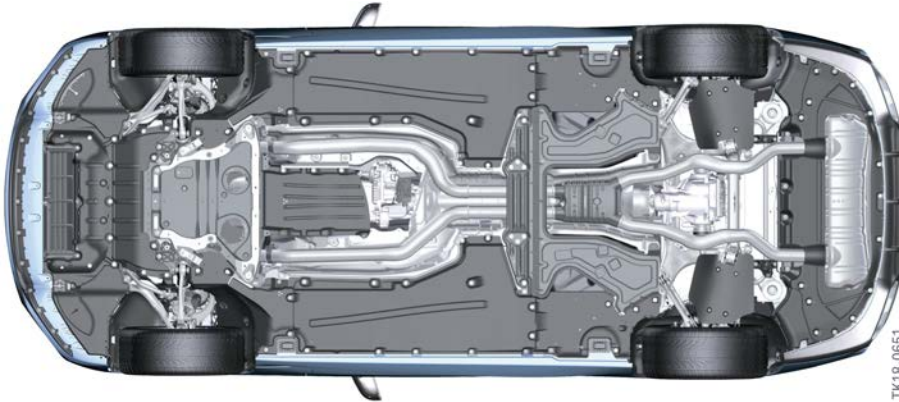
G15 exterior equipment

Index	Explanation
1	Air flaps (in the radiator grille)
2	Headlights (do not extend as far as the radiator grill, currently the most slender headlight in the BMW portfolio)
3	Air breather
4	Exterior mirror (integrated into the window recess finisher strip)
5	Additional brake light (top, behind the rear window)
6	Full LED rear lights

# G15 Body

## 3. Exterior Equipment

### 3.2. Vehicle underbody



G15 Underbody

Compared to the F13, the undercarriage in the area of the rear has once again been closed further. This plays a significant role in the aerodynamics and CO<sub>2</sub> reduction. The use of textile material improves the external acoustics and at the same time reduces weight.

### 3.3. Carbon components

Various carbon components for the G15 can be ordered with the optional equipment M Carbon exterior package (SA 71C):

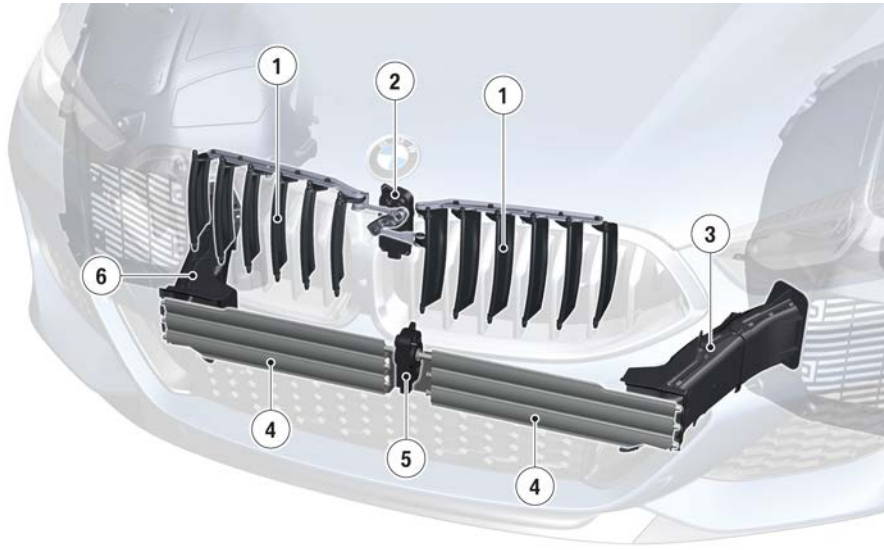
- Air guide element for air curtain
- Trims at the front ornamental grille (omitted in vehicles with front radar sensor)
- Exterior mirror covers
- Rear spoiler
- Diffuser insert.

An M carbon roof can also be ordered with the optional equipment SA 40C.

# G15 Body

## 3. Exterior Equipment

### 3.4. Air damper control



G15 Active air-flap control

Index	Explanation
1	Air flaps at top
2	Actuator for air flaps at top
3	Brake air duct left
4	Air flaps at bottom
5	Actuator for air flaps at bottom
6	Brake air duct right

The G15 also features the familiar 3rd generation air flap control which has been used since the G12. The air flaps are located inside the ornamental grille surround at the top and behind the central air inlet of the lower bumper panel.

The top and bottom air flaps are controlled by separate actuators. When a corresponding cooling request is received, the bottom air flaps always open first and then the top air flaps. The air flaps at the bottom can also have several intermediate settings.

A new feature of the G15 is that the brake air ducts can now also be closed via the flap system at the bottom.

# G15 Body

## 4. Body Repair Level 1

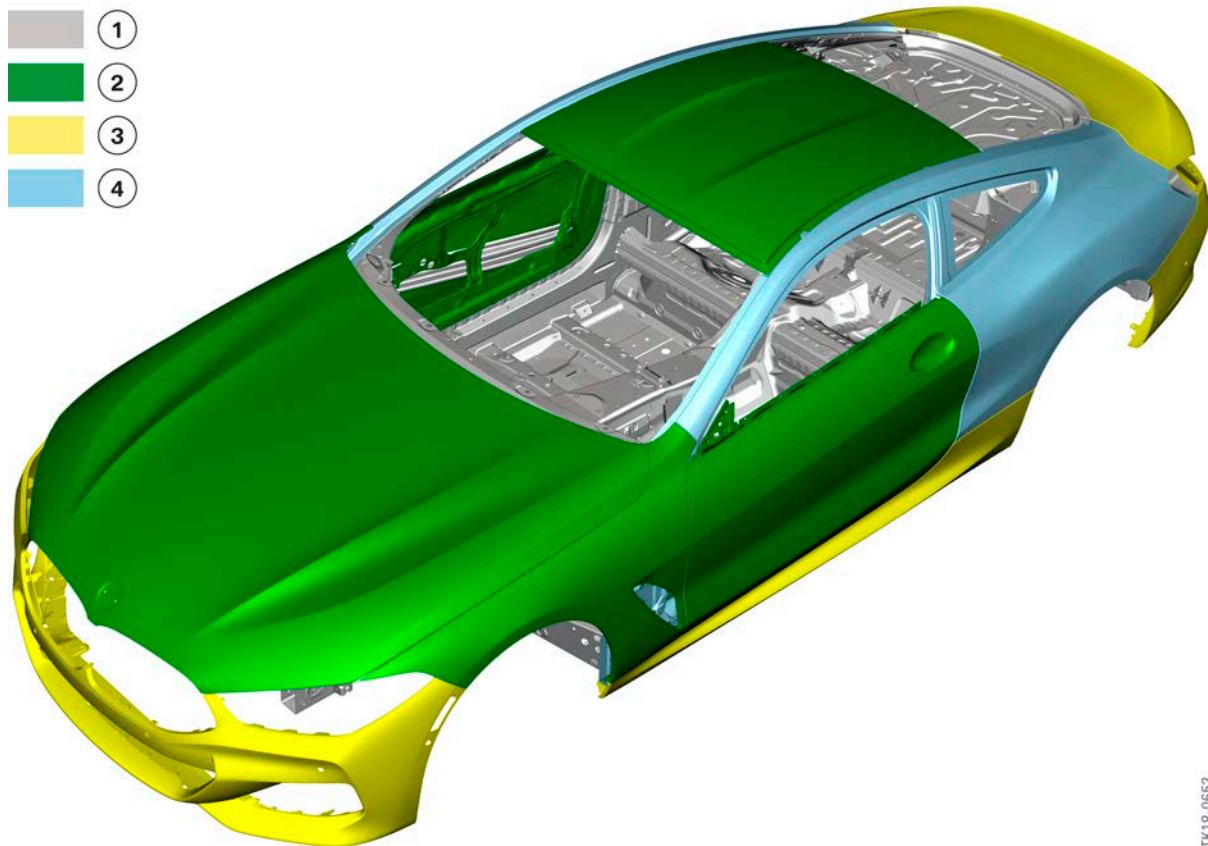
### 4.1. Overview

Taking into account the repair stages of the BMW workshop information system, the body repair work in the Technical Qualification is divided into 3 repair levels. Each of the 3 Body Repair Levels includes certain prerequisites in terms of the qualifications of the employees and the workshop equipment.

The special characteristics of the mounted body parts and materials used in the outer body skin are described in this chapter.

For information on the basic procedure for carrying out adjustment work on body mounted parts, refer to the "Body Repair Level 1" product information of the body standard qualification and also the workshop information system.

### 4.2. Outer body skin



G15 overview of materials, outer body skin

Index	Explanation
1	Other steel grades
2	Aluminium
3	Plastic (SMC, PP, EPDM)
4	Deep drawing steel

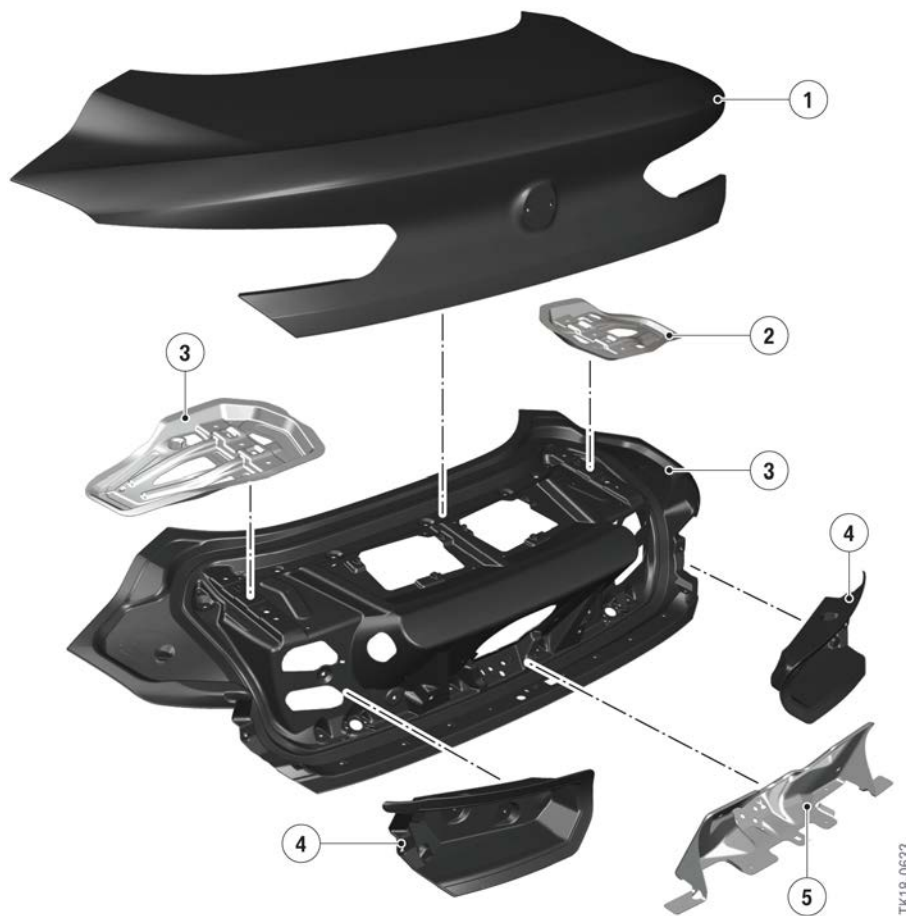
# G15 Body

## 4. Body Repair Level 1

The following table provides you with an overview of the components of the outer body skin where different materials have been used and/or where the materials have remained the same.

Component	G15	F13
Roof	Aluminium (carbon as option)	Deep drawing steel
Bonnet	Aluminium	Aluminium
Tailgate	Plastic	Plastic
Front side panels	Aluminium	Plastic
Doors	Aluminium	Aluminium
Outer side frame	Deep drawing steel	Deep drawing steel

### 4.3. Tailgate



G15 Tailgate components

# G15 Body

## 4. Body Repair Level 1

Index	Explanation
1	Outer skin (plastic)
2	Hinge reinforcement (steel)
3	Inner shell (plastic)
4	Rear light housing (plastic)
5	Lock reinforcement (steel)

BMW is using a tailgate made of plastic (SMC<sup>1</sup>) with paintable surface for the first time. The IMC method<sup>2</sup> is being used to manufacture the tailgate. Additional lining components are not required. This provides more geometrical design freedom and reduces weight.

<sup>1</sup> SMC (Sheet Molding Compound): plate-shaped, doughy compounds made of thermosetting resins for production of fiber-reinforced plastics.

<sup>2</sup> IMC (in-mould coating): procedure during which the surface of the shaped part is coated while still in the mould.

# G15 Body

## 4. Body Repair Level 1



G15 tailgate

TK18-0634

Index	Explanation
1	Spring support
2	Spindle drive
3	Tailgate lock
4	Automatic Soft Close system

The G15 features an automatic tailgate operation as standard. It is driven from the right via a one-sided conventional spindle drive.

A soft-close function is used to lock the tailgate in the tailgate lock.

# G15 Body

## 4. Body Repair Level 1

### 4.4. Exterior rearview mirrors



G15 exterior rearview mirror

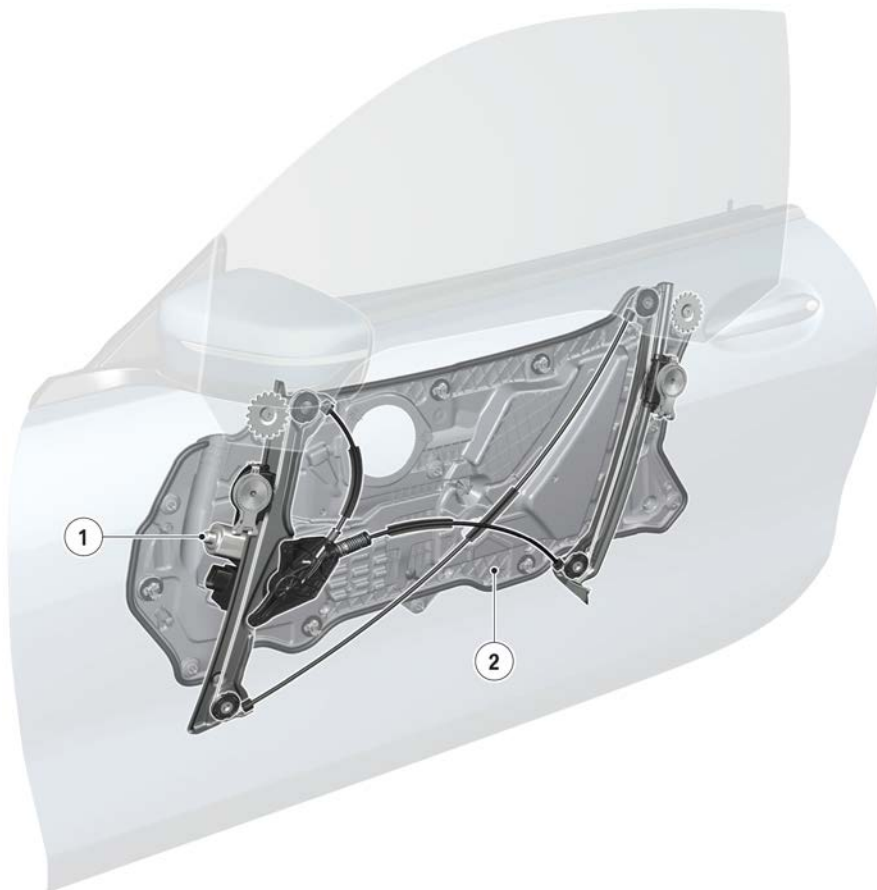
For the first time at BMW, the exterior mirrors are integrated into the window recess finisher strips of frameless doors. This gives the appearance of a decorative strip which runs through into the mirror head.

Exterior mirror caps made of carbon are available in combination with the optional equipment M Carbon exterior package (SA 71C).

# G15 Body

## 4. Body Repair Level 1

### 4.5. Doors



G15 lightweight support

Index	Explanation
1	Power window motor
2	Lightweight support

The lightweight support is mounted on the door structure by means of screws and bayonet fittings. It divides the interior of the door into a dry and wet side. The dry side is closed off to the inside by the door trim panel and the wet side is closed towards the outside by the door outer skin. Sensitive components – such as loudspeakers and airbag sensors – are located on the dry side and are thus optimally protected against moisture.

The power window mechanism is based on a cable mechanism. The electrical drive force is provided by an electric motor which – in contrast with the G11/G12 – is installed on the wet side of the lightweight support.

In contrast to the G05, instead of being activated via pulse-width modulated signals, the power window motors in the G15 are activated via relays as before.

# G15 Body

## 5. Interior Equipment

### 5.1. Overview



TK18-0636

G15 interior equipment

Index	Explanation
1	Light operating unit
2	Frameless interior mirror
3	Display (integrated automatic heating/air conditioning system)
4	Heating and air conditioning controls
5	Radio operating unit
6	Cover (wireless charging station and cup holder)
7	Selector lever
8	Controller

To improve the spatial impression and increase the field of view, a frameless interior mirror is used in the G15.

# G15 Body

## 5. Interior Equipment

If required, glass controls (SA 4A2) can be ordered for the following components:

- Selector lever
- Volume control button
- Controller
- START-STOP button

### 5.2. Ambient lighting



G15 ambient lighting

In the G15, ambient lighting is used as standard which emits indirect light and illuminates contour lines.

A "forwards-looking" lighting design is used in this case in which the center console, but not the instrument panel, is illuminated. This emphasizes the sporting character of the vehicle.

# G15 Body

## 5. Interior Equipment

### 5.3. Front seats



G15 front seat

In the standard seat for the M850i xDrive is the multifunction seat, for the driver and front passenger. These are also equipped with backrest width and seat depth adjustment and a lumbar support.

The following optional equipment can also be ordered (among others):

- Front active seat ventilation (SA 453)
- Seat heating for driver and front passenger (SA 494)  
The distribution of heat between seat cushions and backrests can be controlled in combination with the multifunction seats (SA 4FM).
- M seat belts (SA 4GQ).

A massage function is not available for the G15.

Visually integrated head restraints are equipped with all the functionality and comfort of a height and depth-adjustable head restraint. A head rest characteristic map control prevents a collision with the headliner.

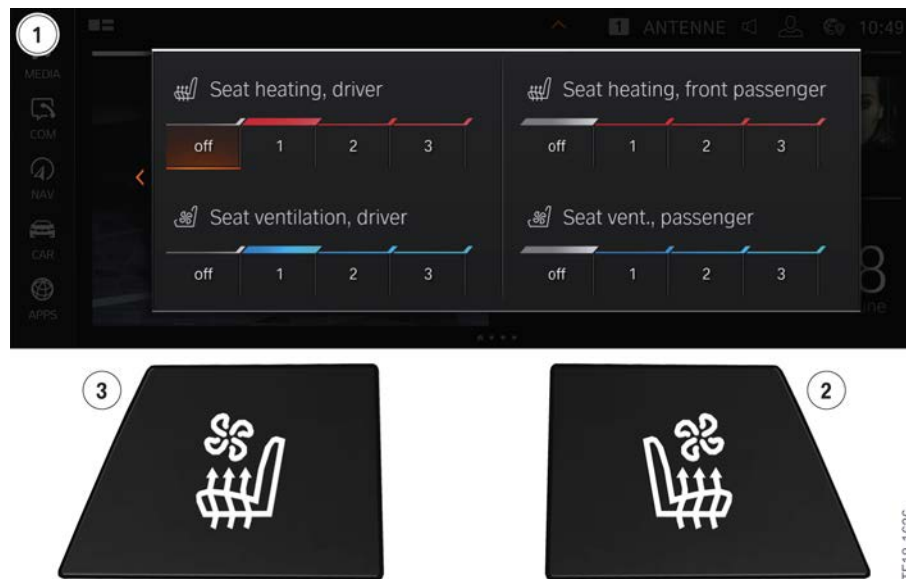
# G15 Body

## 5. Interior Equipment

The switches for fore-and-aft seat adjustment are on the seat. So they can be easily seen and used, they are mounted tilted towards the passengers. The comfort entry is activated via a leather loop on the back of the seat in the area of the backrest upper section.

In contrast to the F13, a conventional seat belt system with belt deflector support on the B-pillars is used in the G15.

### 5.3.1. Active seat ventilation, seat heating



G15 active seat ventilation, seat heating

Index	Explanation
1	Display in the Central Information Display (CID)
2	Button for seat heating/seat climate control on right
3	Button for seat heating/seat climate control on left

The buttons for seat heating and active seat ventilation are centralized in the G15. To ensure the two systems are fully functional therefore, it is necessary to make settings at the CID.

The seat heating and/or the active seat ventilation can be switched on and off by pressing the seat heating/seat and climate control button on the air conditioning control panel. Different intensity levels can be selected by pressing the button several times.

After switching on, a corresponding display appears in the CID, where further settings can be made via the touchscreen or controller.

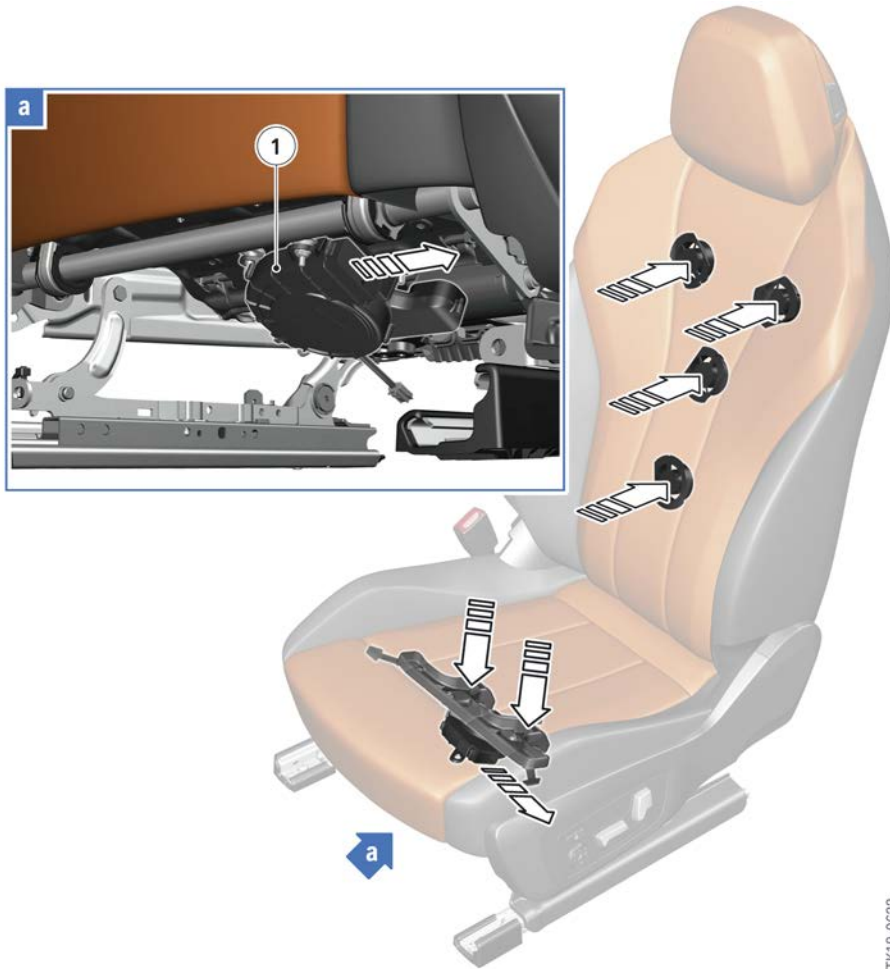
#### Seat climate control

The seat climate control combines the seat heating and active seat ventilation functions.

# G15 Body

## 5. Interior Equipment

If both systems are active, one push of the button reduces the intensity of both functions by one level. The last function to be active is immediately activated when the system is switched back on. If both functions were switched off at the same time, the system automatically activates the seat heating when it is switched back on.



G15 active seat ventilation

Index	Explanation
1	Central fan

A suction ventilation system is being used in the front seats for the first time at BMW. With this system, the cooler air is drawn out of the interior past the body into the seat. This improves the subjective perception of the cooling power.

Additionally, a single fan (central fan) is mounted for the first time under the structure of the front seat instead of the single fan in the seat cushion surface.

# G15 Body

## 5. Interior Equipment

### 5.4. Rear seats



G15 rear seats

Index	Explanation
1	Backrest remote unlocking

To improve the rearwards vision, headrests are not installed in the two rear seats.

Both rear seat backrests can be folded forwards separately to increase the size of the luggage compartment. They are unlocked via two mechanical remote backrest unlocking mechanisms in the luggage compartment.

### 5.5. Climate control



G15 Air conditioning control panel

A 2/2 zone air conditioning system is used in the G15. The first digit stands for the temperature settings which can be separately controlled. The second digit stands for the zones in which the amount of air can be controlled separately.

# G15 Body

## 5. Interior Equipment

Additional functions of the integrated automatic heating/air conditioning system are (among others):

- Automatic program with 5 intensity levels which can be set for the driver and front passenger separately
- Stratification of temperature
- Independent ventilation
- Automatic air recirculation control
- SYNC program
- MAX-A/C.

Further optional equipment is available to order:

- Comfort seating package, (SA 4HB) includes:  
heated armrests at the front in the doors and center console  
as well as steering wheel and front seat heating



