

Technical training.
Product information.

G01 Introduction and Body



BMW Service

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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:



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

Information status and national-market versions

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.

This document basically relates to the European version of left hand drive vehicles. Some operating elements or components are arranged differently in right-hand drive vehicles than shown in the graphics in this document. Further differences may arise as the result of the equipment specification in specific markets or countries.

Additional sources of information

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

- Owner's Handbook
- Integrated Service Technical Application.

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The information contained in this document forms an integral part of the BMW Group Technical Qualification and is intended for the trainer and participants in the seminar. Refer to the latest relevant information systems of the BMW Group for any changes/additions to the technical data.

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G01 Introduction and Body

1. Introduction

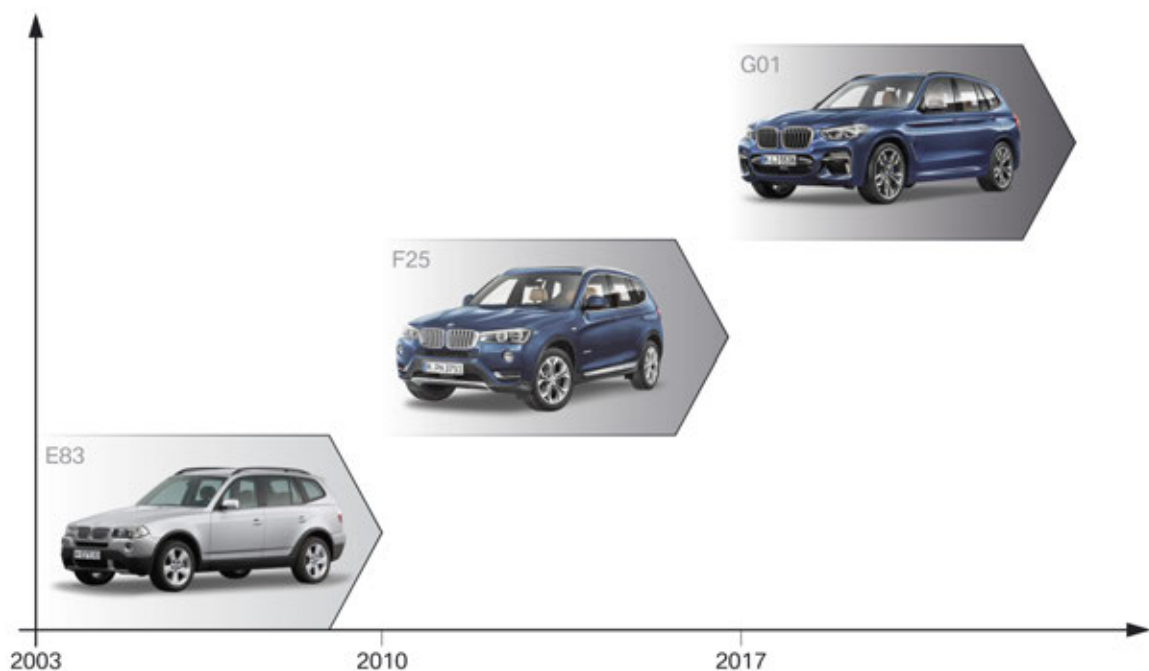
1.1. Overview

In November 2017, the 3rd generation of the BMW X3 Series is being launched on the market with the G01. The G01 has adopted a wealth of technologies from the current BMW 5 Series and 7 Series. The design was developed further and now bears the typical BMW look with its wider kidney grills and distinctly larger headlights. The closed radiator grill and the precise contours of the hood lend the front of the new BMW X3 Series a sporty character. The elegant lines of the side view are emphasized by the accentuated Hofmeister kink.

The new BMW X3 is technologically based on the G12 and G30. The topics listed below are described in the **ST1501 G12 Complete Vehicle** and **ST1604 G30 Complete Vehicle** product information.

Topic	Product information
Light carpet	ST1501 G12 Introduction
Lightweight support, door	ST1501 G12 Introduction
Aluminium in the body structure	ST1501 G12 Introduction

1.2. History



History of BMW X3

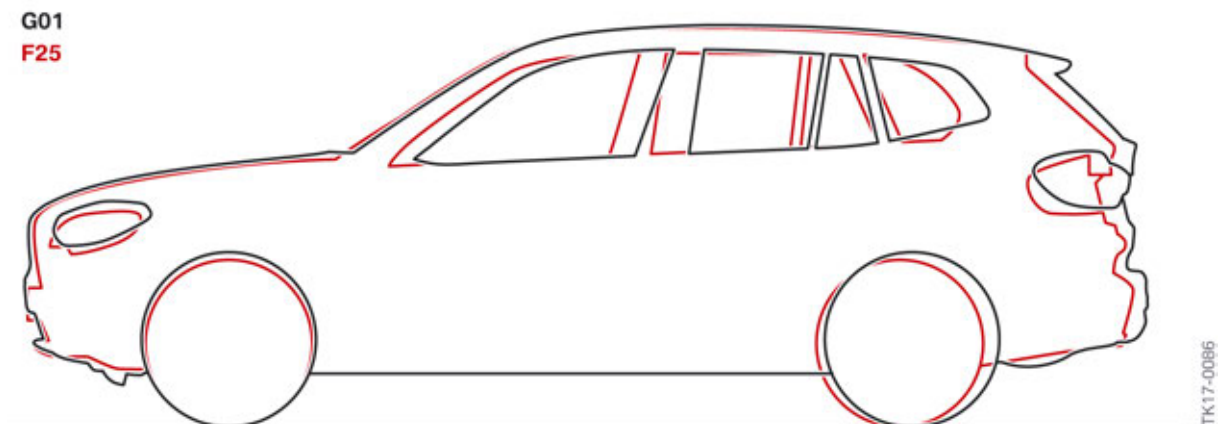
G01 Introduction and Body

1. Introduction

1.4.2. Comparison F25/G01

Explanation	Unit	F25	G01
Vehicle height, empty	[mm]	1661	1676
Front track width	[mm]	1616	1620
Front overhang	[mm]	861	870
Wheelbase	[mm]	2810	2864
Rear overhang	[mm]	977	988 (30i) 992 (M40i)
Rear track width	[mm]	1632	1635
Vehicle length	[mm]	4648	4722 (30i) 4726 (M40i)
Width excluding exterior mirrors	[mm]	1881	1891
Turning circle (unladen)	[m]	11,9	12
Shoulder room, front	[mm]	1455	1462
Shoulder room, rear	[mm]	1423	1423
Elbow room, front	[mm]	1483	1522
Elbow room, rear	[mm]	1458	1477
Maximum headroom, front	[mm]	1033	1045
Maximum headroom, rear	[mm]	994	994
Luggage compartment capacity (without space-saver spare)	[l]	550	550

1.4.3. Silhouette comparison

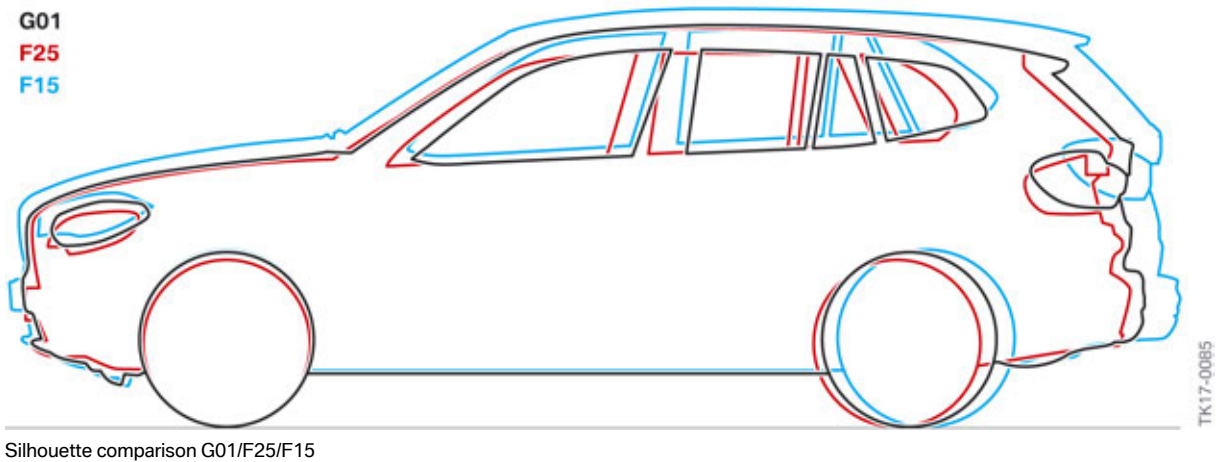


Silhouette comparison of G01/F25

It is distinctly visible that the G01 is only slightly larger in the front than its predecessor, the F25. The wheelbase shifted 55 mm to the rear, which makes it easier to get into the rear.

G01 Introduction and Body

1. Introduction



1.5. Exterior equipment

1.5.1. Overview of the exterior



G01 Overview of the exterior

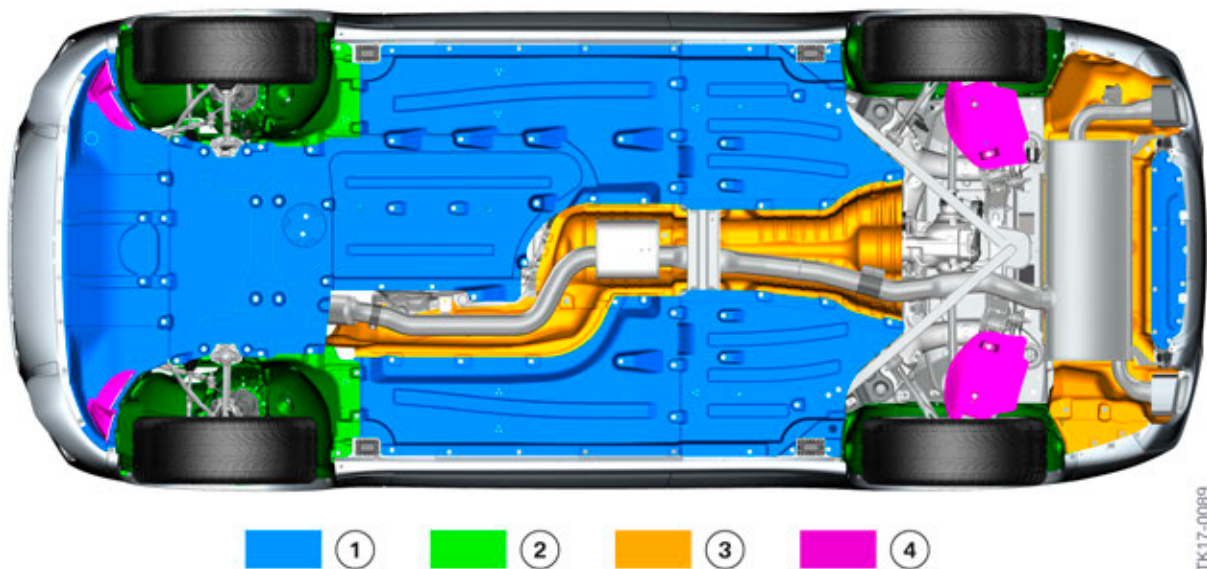
G01 Introduction and Body

1. Introduction

Index	Explanation
1	Air flaps in the radiator grill
2	Headlights
3	LED turn indicator in exterior rearview mirror
4	For all models with a dual exhaust system
5	Light carpet
6	Air breather (design element only)

1.5.2. Underbody

The almost fully closed vehicle underbody plays an important role in the aerodynamics. The acoustics in the vehicle are also significantly improved as a result. In the front section, the air flow is directed past the front wheels with precision by the displacers. In this way, direct impact of the flow on the front wheel is reduced. Two wind deflectors in the rear area at the axle create an optimal underbody airflow. Most of the technical components are protected by the underbody panelling.



G01 Underbody panelling

Index	Explanation
1	Underbody panelling
2	Wheel arch panel
3	Heat shields (aluminium)
4	Wind deflector

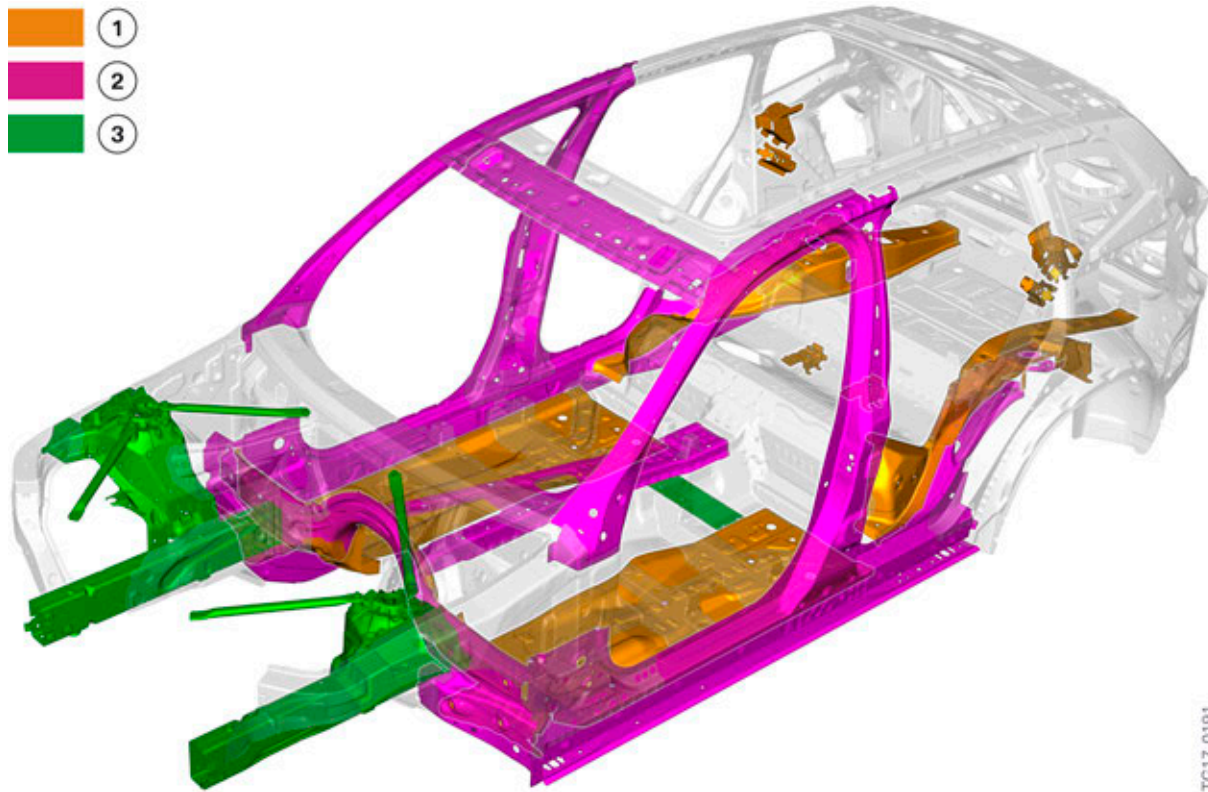
G01 Introduction and Body

2. Bodyshell

2.1. Body structure

The lightweight body construction concept of the G01 comprises high-strength steel and aluminium components. Thanks to the material mix, the materials are able to contribute their specific strengths to the vehicle in the best possible way. As a result of the strict lightweight construction philosophy, the weight of the body has been reduced over that of the predecessor F25, but crash safety has been further improved. No carbon parts are integrated in the body structure.

2.1.1. Steel



G01 Ultra-high-strength steels in the body structure

Index	Explanation
1	Multiphase steel (> 300 N/mm)
2	Ultra-high-strength steel (> 900 N/mm ²)
3	Aluminium

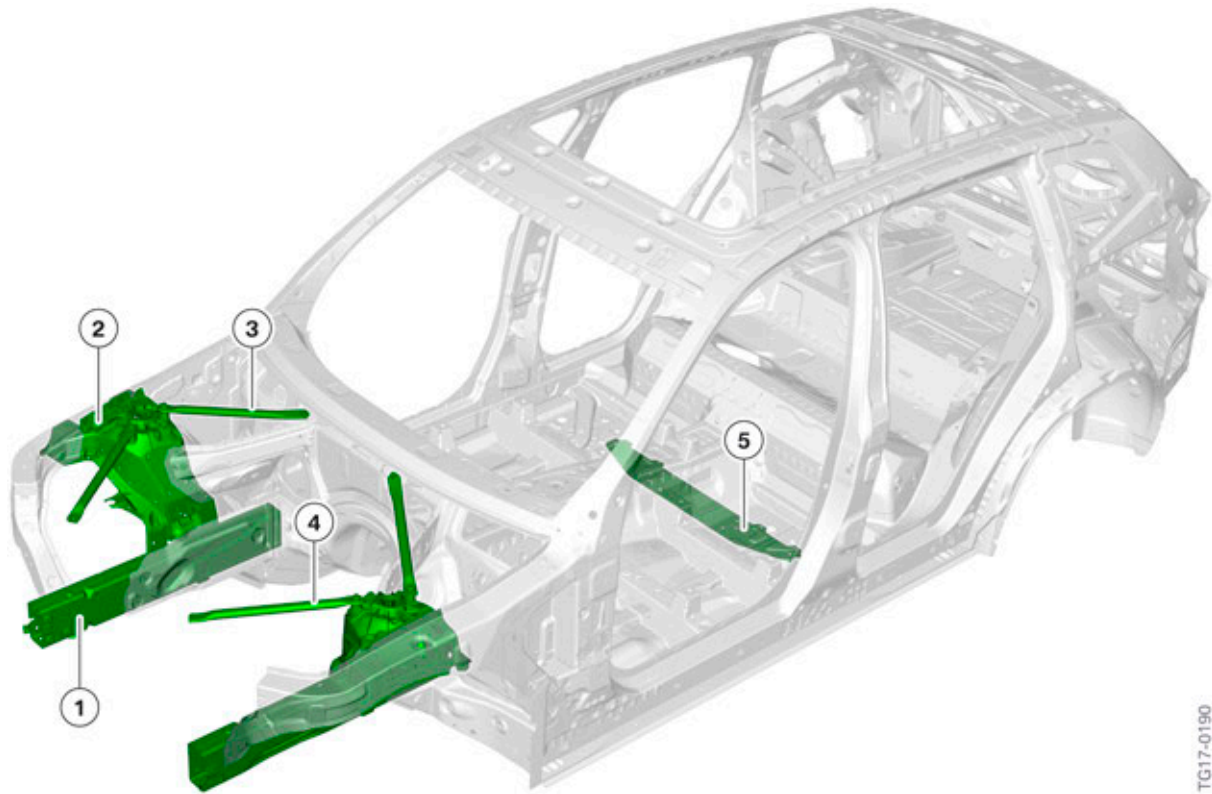
2.1.2. Aluminium

The use of aluminium extruded profiles and complex die-cast aluminium parts permits realization of high body rigidity in combination with low weight. All requirements relating to passive safety are also met.

G01 Introduction and Body

2. Bodyshell

The spring strut domes at the front in the BMW X3 are now also manufactured using the aluminium die casting method and the engine support is produced from an aluminium extruded profile. This contributes to excellent weight distribution in the body structure. New aluminium cast alloys were developed in order to increase the crash safety of these components.



G01 Aluminium in the body structure

Index	Explanation
1	Engine support, aluminium extruded profile
2	Spring strut dome, aluminium die casting
3	Rear strut for bulkhead
4	Front strut for lock carrier
5	Cross member, transmission tunnel

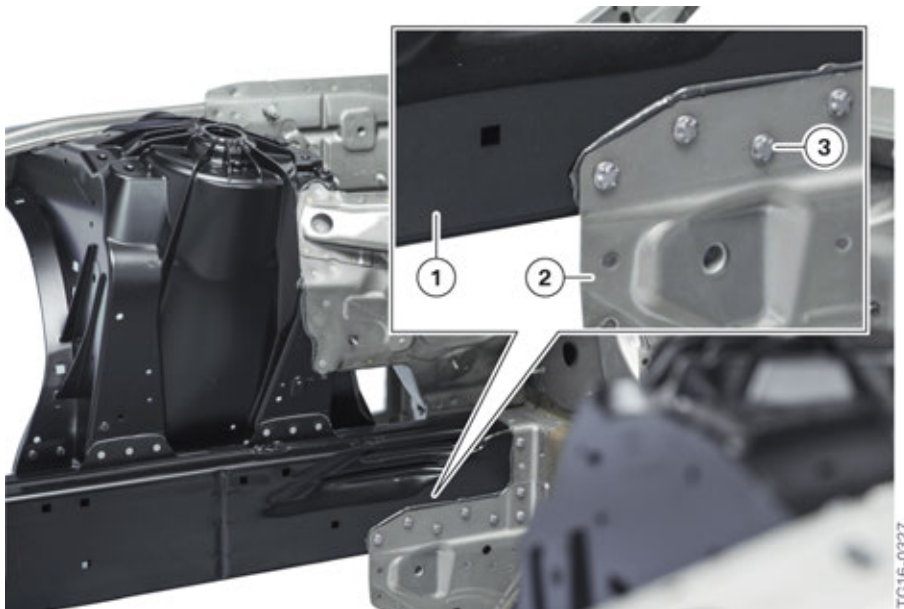
2.2. Screw connections

Some of the aluminium-steel connections in the G01 body structure are produced using a new body joining technique: flow drill screws. These include, for example, the connection between the engine support (aluminium extruded profile) and the bulkhead carrier support (ultra-high-strength hot-formed steel).

G01 Introduction and Body

2. Bodyshell

Flow drill screws are driven directly into the superposed sheets. When this happens, the specially shaped tip produces a flow hole and a thread is then cut. This joining technique is used **exclusively** in production.



G01 Screw connection of engine support/bulkhead

Index	Explanation
1	Engine support
2	Engine support connection
3	Flow drill screw



Once a self-tapping screw connection has been loosened, it must not be re-joined using self-tapping screws. Otherwise this will lead to a considerable reduction in strength.

During repairs according to body repair levels 2 and 3, the self-tapping screws are replaced by blind rivets.

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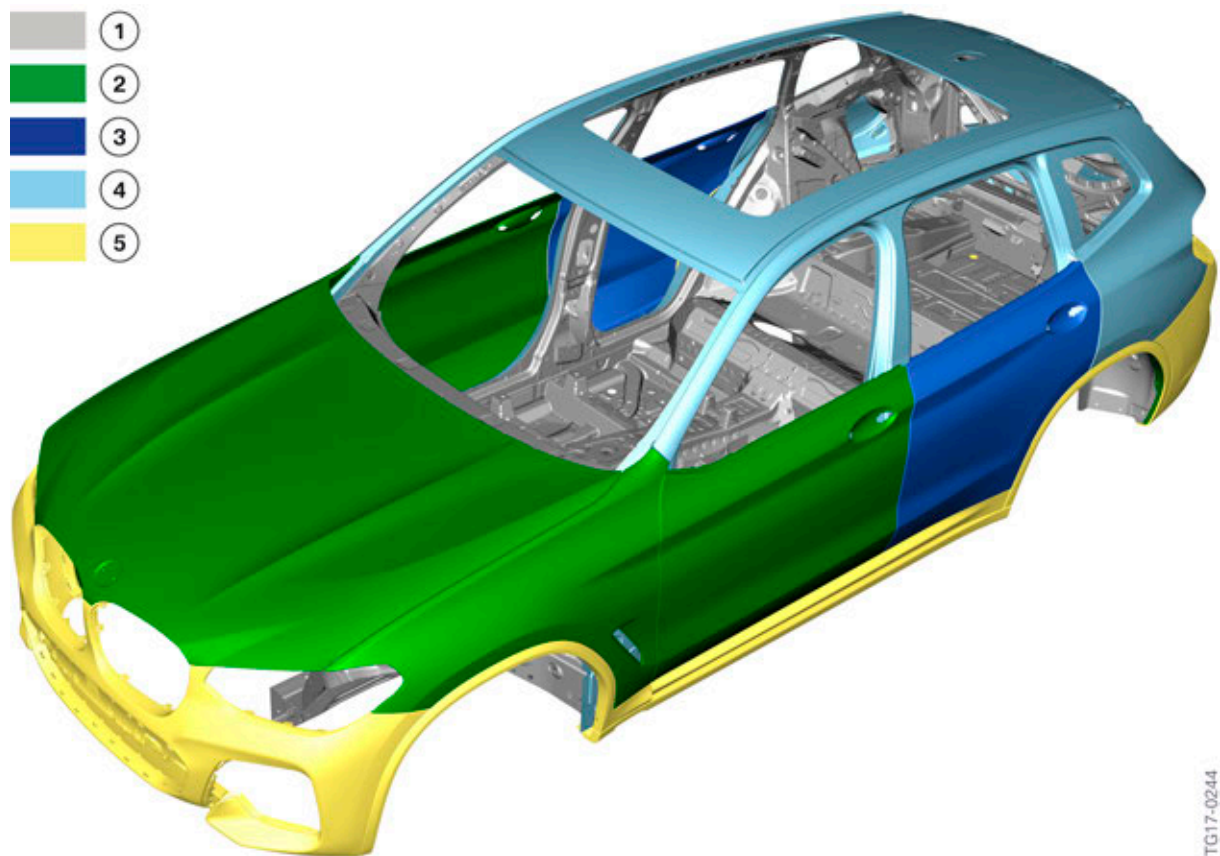
3. Body Repair Level 1

3.1. Repair Level 1

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 add-on body parts and the materials used in the outer body skin are described in this chapter. However, the basic functions of the roof and the outer body skin components made of plastic are the same as on other current BMW models. For this reason, these components will not be described in detail here.

3.2. Outer body skin materials



G01 outer body skin

Index	Explanation
1	Other steel grades
2	Aluminium
3	Bake-hardening steel
4	Deep-drawing steel
5	Plastic

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3. Body Repair Level 1

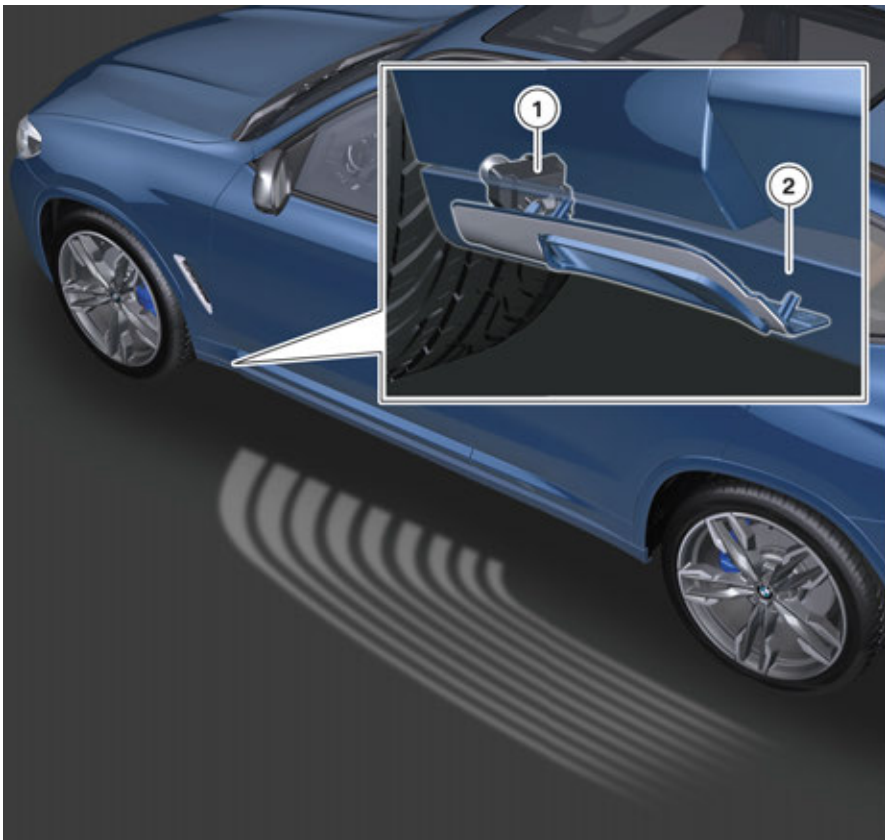
Compared to the predecessor F25, the front doors, hood and the front fenders of the G01 are made of aluminium. The rear doors are made of bake-hardening steel. This use of material leads to a significant reduction in weight.

The bumper panels at front and rear as well as the rocker panels are made of plastic (PP + EPDM) as before. However, further development of this material made it possible to reduce the density and weight.

3.3. Light carpet

In addition to the G12 BMW 7 Series, the G01 BMW X3 is now the second vehicle to be equipped with the light carpet as welcome lighting. The light carpet is a graphic projection in the entrance and exit area on the driver's and front passenger's sides that is generated by an LED element. The LED element is installed behind the side sill trim panel and can be adjusted from the outside.

Further information on the light carpet and the settings can be found in **ST1501 G12 Body** .



G01 Light carpet

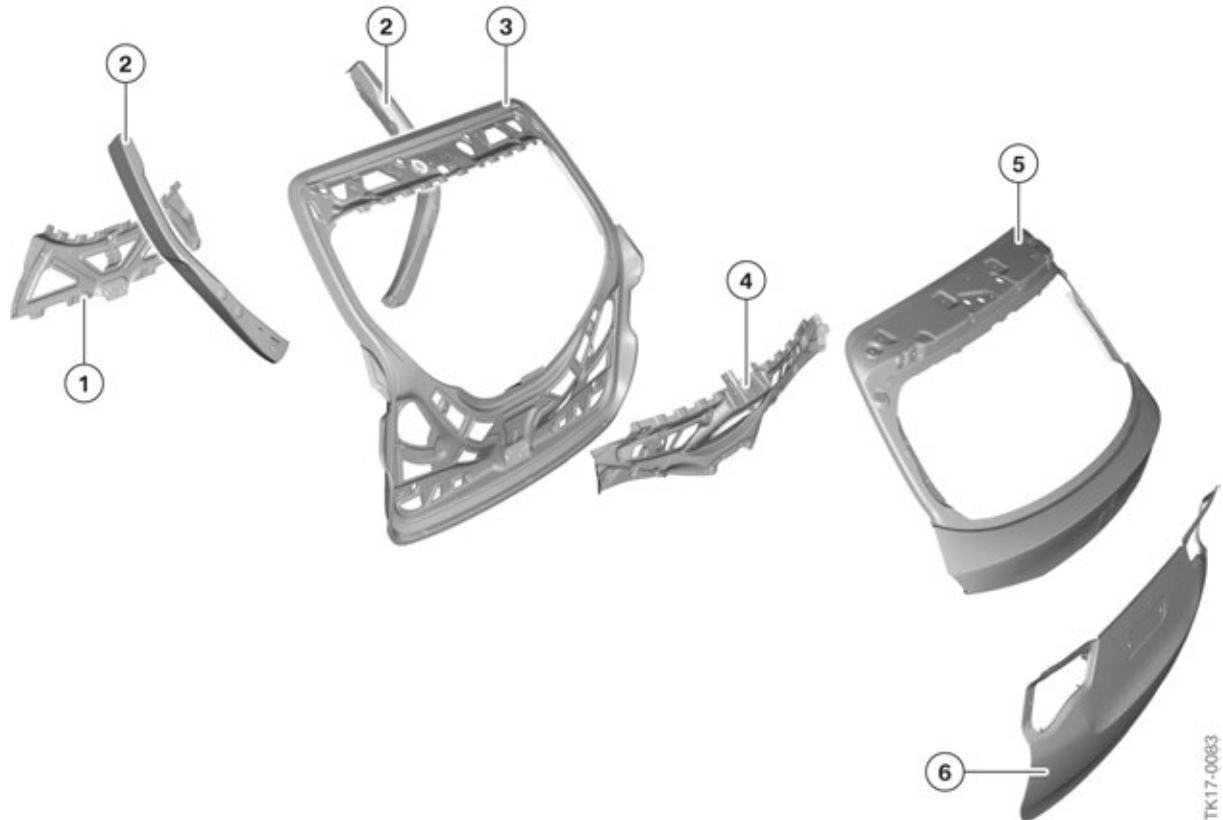
Index	Explanation
1	LED unit
2	Side sill trim panel

G01 Introduction and Body

3. Body Repair Level 1

3.4. Tailgate

The new X3 features a steel tailgate in monocoque construction. Through the use of an IHU (internal high pressure forming) in the tailgate structure, it was possible to reduce the weight by 2.2 kg / 4.8 lbs compared to the F25. This design also allows better rear window visibility. Forming of or damage to the IHU profile must be avoided. The multi-part layout of the tailgate is achieved with the aid of state-of-the-art laser welding techniques.



G01 tailgate

Index	Explanation
1	Reinforcement plate, inside
2	IHU profile, left and right (internal high pressure forming)
3	Tailgate inner panel
4	Reinforcement plate, outside
5	Outer skin panel, top
6	Outer skin panel, bottom, with number plate carrier

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4. Interior Equipment

4.1. Instrument panel overview

The vehicle interior shows significant improvements in comparison to the F25. The interior look and all-round visibility have been improved. This is further supported by the very flat design of the roof function center. In addition, the headliner, which is equipped with sound insulation, helps to make it noticeably easier for passengers to have conversations with each other between the first and second rows of seats.



G01 Instrument panel overview

The clearly laid out, driver-oriented instrument panel offers the comfort typical for BMW vehicles.

G01 Introduction and Body

4. Interior Equipment

4.2. Center console

The storage compartment in front of the gear selector can be used together with the cupholders and closed with a roller cover. The wireless charging tray is located in front of the cupholders.



G01 center console

Index	Explanation
1	Center armrest
2	Wireless charging tray
3	USB audio interface
4	Cigarette lighter
5	Cupholder/ashtray insert
6	Storage compartment cover

G01 Introduction and Body

4. Interior Equipment

4.3. Lines

In addition to the comprehensive offering of optional equipment, the G01 can also be individualized with the following equipment packages. The equipment packages contain both general optional equipment and line-specific features.

The following lines are available for the new BMW X3 xDrive30i:

- BMW xLine (100% option 7HW)
- BMW Luxury Line (OE 7S2) included in the Luxury package (OE ZPL)



G01 Lines, exterior

G01 Introduction and Body

4. Interior Equipment



G01 Lines, interior

The new X3 xDrive30i can also be ordered with the M sport package (OE ZMP).

4.4. Seats, driver/front passenger

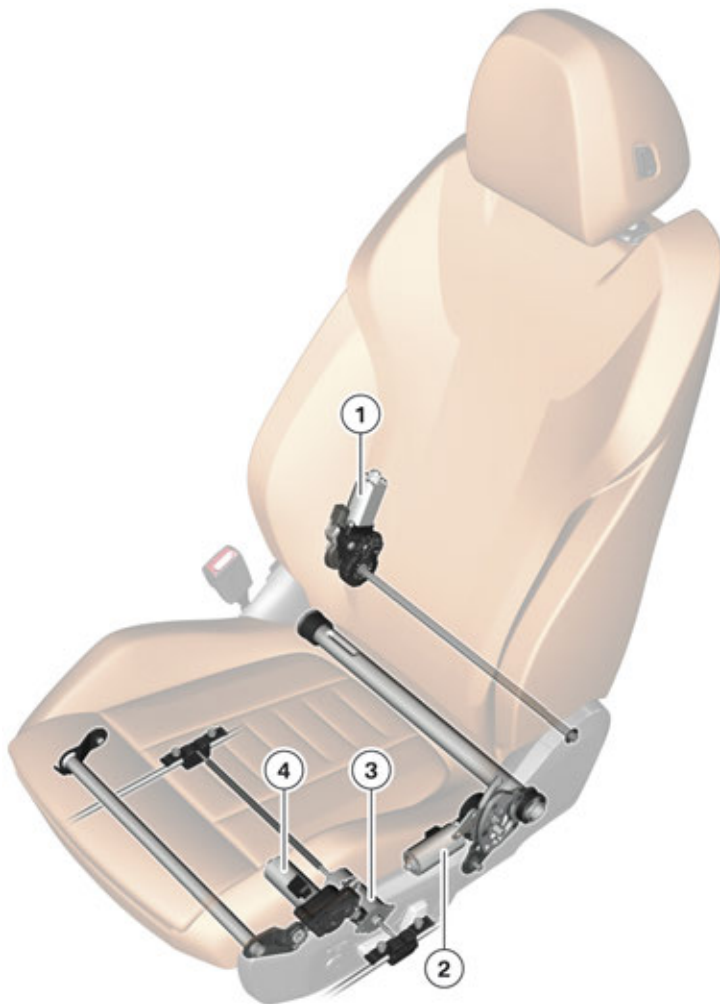
4.4.1. Sports seat

The power sports seats are standard in all X3 models, they feature an electrical adjustment of the backrest width. All variants of head restraints can be manually adjusted in their height and depth. The available optional and standard equipment is shown in the following table.

Explanation	Sports seat
Power front sport seats with seat memory	Standard
Heated front seats	OE 494
Lumbar support (standard in the M40i)	OE 488

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4. Interior Equipment



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Sports seat, electric

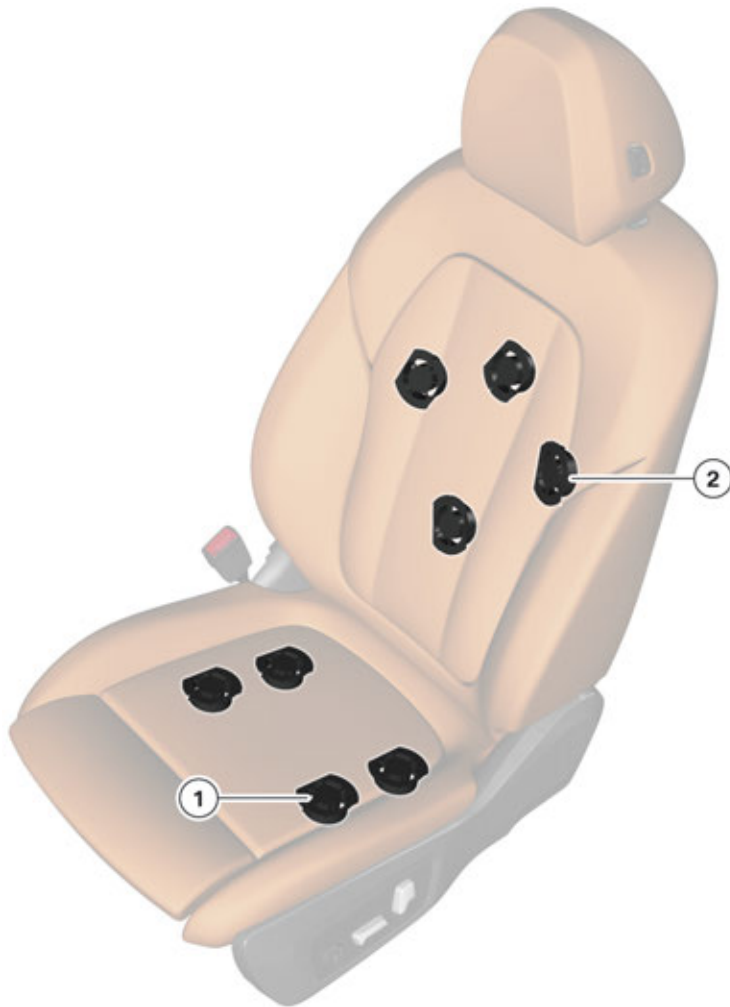
Index	Explanation
1	Motor, backrest adjustment
2	Motor, seat height adjustment
3	Motor, seat length adjustment
4	Motor, seat angle adjustment

4.4.2. Front ventilated seats

The ventilated front seats are optional in all X3 models (OE 4FH).

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4. Interior Equipment



TK17-0185

Climate control components

Index	Explanation
1	Ventilation flap motor, seat cushion
2	Ventilation flap motor, backrest

4.4.3. Rear seats

The decorative stitches and back stitching, which are already in use in the first row of seats, are also carried over into the second row of seats, where they help create a harmonious overall impression. The second row of seats offers space for up to 3 passengers and for transporting 3 child seats, of which the 2 outer seats can be secured using the ISOFIX system. Functionality is underlined thanks to the easily accessible ISOFIX attachments and the cup holders in the center armrest. A high degree of customer benefit is derived from the usual 40:20:40 foldable rear seat backrest, which is integrated as standard equipment and can be conveniently unlocked remotely from the luggage compartment. The rear seat position for the passengers can be individually adjusted by adjusting the backrest tilt. This setting is adjusted via cables and positions the backrest in 4 different positions. The customer can select seat heating in the rear as optional equipment (OE 4HA).

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4. Interior Equipment



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G01 rear seats

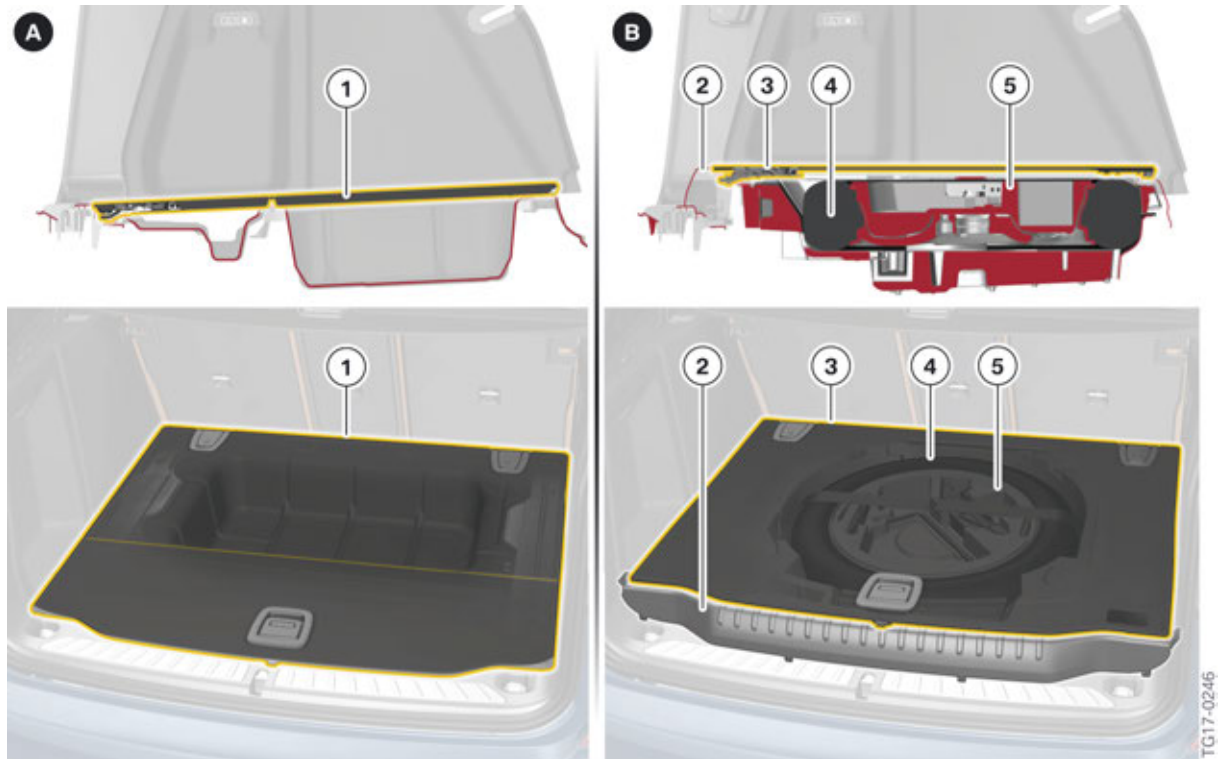
Index	Explanation
1	Cupholder
2	ISOFIX
3	Backrest, unlock
4	Mechanism of the backrest tilt adjustment
5	Switch, backrest tilt adjustment

G01 Introduction and Body

5. Luggage Compartment

5.1. Luggage Compartment Volume

The luggage compartment capacity of the new G01 X3 is identical to the F25 and remains at 550 liters. The addition of an space-saver spare (OE 300) as optional equipment reduces the luggage compartment capacity. In vehicles with the space-saver spare optional equipment (OE 300), the customer can restore the luggage compartment capacity back to 550 liters by taking out the insert along with the space-saver spare.



G01 luggage compartment

Index	Explanation
A	Luggage compartment without space-saver spare
1	Luggage compartment removable panel
B	Luggage compartment with space-saver spare
2	Insert for space-saver spare
3	Luggage compartment removable panel
4	Space-saver spare
5	Insert for jack/tools

Through the use of cavities behind the luggage compartment trim, the first-aid pouch is stored behind the left luggage compartment trim. Another storage tray is available to the customer on the right luggage compartment side. Located behind the luggage compartment trim on the right is the power distribution box.

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5. Luggage Compartment



G01 Luggage compartment storage compartments

Index	Explanation
1	12-V power socket, right
2	Storage compartment, right
3	Unlocking, rear seat backrest, right
4	Power distribution box behind storage compartment on right
5	Unlocking, rear seat backrest, left
6	Storage compartment, left
7	Storage for the toolkit behind the left storage compartment

G01 Introduction and Body

6. Trailer Hitch

6.1. Concept

The G01 X3 will be the first BMW SAV in the US to feature a optional factory installed trailer hitch (OE 3AC). The hitch will come equipped with a 2" square receiver that will enable customers to use a broad range of BMW Accessories including tongues, drop tongues, tow balls and step to help access roof mounted accessories and several varieties of bike racks.

The maximum towing capacity of the G01 will be approximately 2000 kg (4400 lbs) with a nose weight of 200 kg (441 lbs).



Trailer hitch with 2" square receiver

6.1.1. Trailer Stabilization Control

The vehicle will also be equipped with Trailer Stabilization Control, this feature will support the driver in stopping the swinging of the trailer. The Trailer Stabilization Control detects swinging and automatically brakes the vehicle quickly to leave the critical speed range and stabilize the vehicle-trailer combination. This feature is automatically activated above speeds of 65 km (40 mph).

G01 Introduction and Body

6. Trailer Hitch

6.1.2. System limits

The system cannot intervene or not intervene in time in the following situations:

- If a trailer jackknifes suddenly, for instance on slippery roads or loose surfaces.
- If a trailer with a high center of gravity tilts before swinging is detected.
- If Dynamic Stability Control (DSC) is deactivated or has a malfunction.



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