

# Supplemental Body and Equipment Guideline for eSprinter



Supplemental Guideline for eSprinter – Model Series 907  
MY2024; Edition 2024-01

Addendum to the Sprinter Body and Equipment Guideline

Mercedes-Benz



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## 1.1 Aim of this Body-Equipment-Guideline

This supplemental guideline, "Supplemental Body and Equipment Guideline for eSprinter - Model Series 907" supplements the "Body and Equipment Guideline for Sprinter - Model Designation 907; Edition MY2023.

### **!** NOTE

This supplemental guideline is based on the development of the eSprinter - Model Series 907 with rear wheel drive (electric motor) for the United States and Canadian markets.

The content of this supplemental guideline applies exclusively in combination with the aforementioned Body and Equipment Guideline for Sprinter and only for the vehicle model designations specified in see chapter 3.1 Vehicle and model designation and see chapter 3.2 Model overview.

The content described here also applies primarily as a supplement to the matters in the aforementioned Body-Equipment-Guideline. The subsections described here do not replace the subsections of the Body-Equipment-Guideline, but supplement them.

Refer to the Body-Equipment-Guideline for all matters not described here.

The layout and conventions used in this supplemental document are the same as those of the Body-Equipment-Guideline.

**i** You can find further general information of the Body-Equipment-Guideline for Sprinter Vans.

## 1.2 Conventions

**i** You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

## 1.3 Vehicle safety

**!** NOTE

Constructional modifications to high-voltage components, high-voltage lines, and equipotential bonding lines are not permissible.

**⚠** DANGER

If you use improperly installed mains sockets or use adapters, extension cables, or similar to connect the charging cable to a mains socket, fires or electric shocks could occur.

There is danger to life and limb!

In order to avoid risks, please observe the following:

- Only connect the charging cable to mains sockets that
  - have been properly installed and
  - have been inspected by a qualified electrician.
- For safety reasons, use charging cables that are approved by Mercedes-Benz AG for this vehicle; observe the other specifications in the Operator's Manual for your vehicle. Please also review: <https://www.mbvans.com/en/Charging>
- Do not use damaged charging cables.
- It is not permissible to lengthen the charging cables.
- Do not use extension cables, cable drums, or power strips.
- Do not use socket adapters to connect the charging cable to the mains socket. The only exception is if the adapter has been tested and approved by the manufacturer for charging the high-voltage battery in an electric vehicle.
- Always observe the safety notes in the Operator's Manual for the socket adapter.

**⚠** DANGER

When working on high-voltage component parts, you could receive an electric shock.

There is danger to life and limb!

In order to avoid risks, please observe the following:

- Do not tamper with high-voltage component parts or the orange cables of the high-voltage on-board electrical system.
- Do not touch any high-voltage component parts or any of the orange cables of the high-voltage on-board electrical system in vehicles that have been in accidents.
- Do not touch damaged component parts or any damaged orange cables of the high-voltage on-board electrical system.
- Do not remove the covers marked with yellow warning adhesive labels on the component parts of the high-voltage on-board electrical system.
- Do not insert conductive parts into the charging cable connector or the charging cable socket.

**⚠** WARNING

Upfitters should NOT plan to connect with or modify the high voltage system (see FMVSS 305) components in any way. Only the low voltage (12 volt) electrical system can be utilized for a power source by upfitters.

## DANGER

If you modify component parts of the high-voltage on-board electrical system or touch damaged component parts, you could receive an electric shock. Damage to the component parts of the high-voltage on-board electrical system may not be visible in an accident.

There is danger to life and limb!

After an accident, do not touch any high-voltage components, and never carry out modifications on the high-voltage on-board electrical system. Have the vehicle towed after an accident, and have the high-voltage on-board electrical system checked at a qualified specialist workshop.

## NOTE

If work is carried out on a vehicle with an electric drive, the country-specific specifications regarding statutory protective equipment and the accident prevention regulations must be observed, e.g. the latest audit standard of DGUV Information 209-093 "Training for work on vehicles with high-voltage on-board electrical systems" as amended for Germany or the SAE J2344 "Guidelines for Electric Vehicle Safety".

For additional training please review the SAE PD291808 "High Voltage Vehicle Safety Systems".

## 1.4 Operational safety

### 1.4.1 Important safety notes

#### WARNING

If you fail to have the prescribed service/maintenance work and any necessary repairs carried out, malfunctions or system failures could occur.

There is risk of an accident and danger to life and limb!

Always have the prescribed service/maintenance work and any necessary repairs carried out at a qualified specialist workshop.

#### WARNING

If you switch off the ignition while driving, safety-relevant functions will be restricted or no longer available. This can affect functions such as the power steering system and the brake force boosting. It will then take considerably more effort to steer and brake.

There is risk of an accident and danger to life and limb!

Do not switch off the ignition while driving.

**⚠ WARNING**

If you drive over obstacles at high speed or the vehicle bottoms out when driving off-road, severe impacts can occur on the underbody, transmission, electric motor, tires, or wheels. This could cause visible or invisible damage to your vehicle and the high-voltage battery. You could lose control of the vehicle, or damaged components could fail.

There is a risk of accident and fire!

Avoid off road driving on terrain where additional ground clearance is required. The rear transmission and electric motor are positioned at the lowest point of the vehicle and can be damaged when colliding with obstacles on the ground.

For ground clearance and measurements please review the 2D-Drawings on [www.upfitterportal.com](http://www.upfitterportal.com).

Therefore, drive slowly over obstacles and ensure there is sufficient ground clearance when driving.

If driving safety is impaired or you suspect there is damage while driving, stop safely without delay, notify a qualified specialist workshop, and have your vehicle inspected and repaired there.

**! NOTE**

Vehicles with an electric motor produce significantly lower levels of driving noise than vehicles with a combustion engine. For this reason, other road users may not be able to hear your vehicle in certain situations. This can happen when you are parking, for example, in which case you may not be able to see or be seen by other road users.

This requires that you drive particularly cautiously because the possibility of error by other road users must be taken into account.

Vehicles with an electric motor can be equipped with a sound generator that produces a noise. This makes it easier to hear the vehicle.

Observe further information and specifications on acoustic ambient protection in 3.3 Selecting the basic vehicle (→ page 20) and in your vehicle's Operator's Manual.

**1.4.2 Diagnostics connection**

The diagnostics connection is used to connect diagnostic devices at a qualified specialist workshop.

**⚠ WARNING**

When you connect devices to a diagnostics connection in the vehicle, the functions of various vehicle systems could be impaired. This can compromise the operational safety of the vehicle.

There is risk of an accident and danger to life and limb!

Diagnostic devices can only be connected to the diagnostics connection (OBDII connector) of the vehicle for diagnostic purposes/vehicle maintenance or for when the vehicle is stationary/parked.

Do not connect to the diagnostics connection (OBDII connector) or connect to the wiring of the OBDII connector or to the CAN (Controller Area Network) when the vehicle is in motion.

**⚠ WARNING**

Loose devices or hanging cables from devices connected to a diagnostics connection can obstruct the space for the pedals. During sudden driving or braking maneuvers, the devices or cables could fall between the pedals. This could impede the functioning of the pedals.

There is risk of an accident and danger to life and limb!

## WARNING

Objects in the driver footwell can restrict pedal travel or block a fully depressed pedal. This compromises the operational and road safety of the vehicle.

There is risk of an accident and danger to life and limb!

Stow all objects in the vehicle securely so that they cannot fall into the driver footwell. Always install floor mats securely and as specified, so that sufficient clearance for the pedals is guaranteed. Do not use loose floor mats and do not place multiple floor mats on top of each other.

## NOTE

If devices are used at the OBD II diagnostic connection connection while the engine is off, the on-board 12V battery system can discharge and may result in not being able to start the vehicle.

## 1.4.3 Qualified specialist workshop

A qualified specialist workshop is one that possesses the necessary expertise, tools, and qualifications for the eSprinter. These enable the required work on the vehicle to be carried out properly. This applies in particular for safety-relevant work.

Pay attention to the further information in the service booklet.


Mercedes-Benz AG recommends that you use a specialist workshop that is qualified for the eSprinter.

Always have the following work on the vehicle carried out at a qualified specialist workshop:

- Safety-relevant work
- Service and maintenance work
- Repair work
- Modifications, installations, and conversions
- Work on electric and electronic component parts (including the high-voltage on-board electrical system)
- Replacement of the 12 V battery at the specified intervals; every three years at the latest

You can get up-to-date information about your vehicle's service at any time from a qualified specialist workshop, e.g. at a Mercedes-Benz Service Center.

Observe further specifications on the high-voltage on-board electrical system and associated components in chapter 1.4.5 High-voltage on-board electrical system (→ page 10).

 Country-specific specifications regarding statutory protective equipment and accident prevention regulations must be observed, e.g. the latest audit standard of DGUV Information 209-093 "Training for work on vehicles with high-voltage on-board electrical systems" as amended for Germany or the SAE J2344 "Guidelines for Electric Vehicle Safety".

For additional training please review the SAE PD291808 "High Voltage Vehicle Safety Systems".



#### 1.4.4 Modifications to the vehicle

##### **⚠ WARNING**

Improper work or modifications on the vehicle, e.g. the routing of cables behind trim panels, could cause the safety systems in your vehicle to stop functioning correctly. Because of this, the safety systems may not protect you or others as they are supposed to. You could lose control of the vehicle.

There is risk of an accident and danger to life and limb!

Always have all work on the vehicle – particularly safety-relevant work and work on safety-relevant systems and service operations – carried out at a specialist workshop that is qualified for the eSprinter. Mercedes-Benz AG recommends that you use a Mercedes-Benz Service Center for this purpose.

##### **⚠ WARNING**

Improper work on the drive system or modifications to the vehicle could cause systems in your vehicle to stop functioning correctly. You could lose control of the vehicle.

There is risk of an accident and danger to life and limb!

Always have work on the drive system and modifications to the vehicle, e.g. installations or conversions, carried out at a specialist workshop that is qualified for the eSprinter.

##### **⚠ WARNING**

Modifications to electronic component parts, their software, or wiring can impair their functioning and/or the functioning of other networked components. Safety-relevant systems, in particular, may also be affected. Because of this, they may no longer function properly and/or compromise the operational safety of the vehicle.

There is risk of an accident and danger to life and limb!

Never carry out any modifications to the wiring and electronic component parts or their software. Have all work on electrical and electronic devices carried out at a qualified specialist workshop.

##### **! NOTE**

Constructional modifications to high-voltage components, high-voltage lines, and equipotential bonding lines and their surroundings are not permissible.

## 1.4.5 High-voltage on-board electrical system

### Danger of electric shock

#### **⚠ DANGER**

When working on high-voltage component parts, you could receive an electric shock.

There is danger to life and limb!

In order to avoid risks, please observe the following:

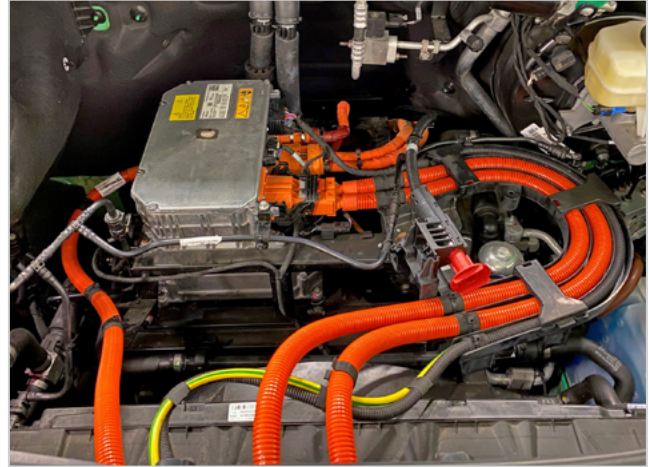
- Do not tamper with high-voltage component parts or the orange cables of the high-voltage on-board electrical system.
- Do not touch high-voltage component parts or orange cables of the high-voltage on-board electrical system in vehicles involved in accidents.
- Do not touch damaged component parts or any damaged orange cables of the high-voltage on-board electrical system.
- Do not remove the covers marked with yellow warning adhesive labels on the component parts of the high-voltage on-board electrical system.
- Do not insert conductive parts into the charging cable connector or the charging cable socket.
- For safety reasons, only use charging cables that have been approved by Mercedes-Benz for use in this vehicle. Observe the additional specifications in your vehicle's Operator's Manual.

**i** See the Operator's Manual of your vehicle for further information and specifications.

All component parts of the high-voltage on-board electrical system are marked with yellow warning adhesive labels alerting you to the hazards due to high voltage.



All of the electric cables of the high-voltage on-board electrical system in the vehicle are marked in the orange signal color with cable coverings or additional protective coverings.



High-voltage lines in the engine compartment

#### **! NOTE**

Constructional modifications to high-voltage components, high-voltage lines, and equipotential bonding lines and their surroundings are not permissible.

Before carrying out general operations, such as replacing bulbs or checking the coolant level, observe the following:

- The ignition must be switched off.
- The charging cable for charging the high-voltage battery must not be connected.

**i** If such general work is carried out on a vehicle with an electric drive, the country-specific specifications regarding statutory protective equipment and the accident prevention regulations must be observed, e.g. the latest audit standard of DGUV Information 209-093 "Training for work on vehicles with high-voltage on-board electrical systems" as amended for Germany or the SAE J2344 "Guidelines for Electric Vehicle Safety".

For additional training please review the SAE PD291808 "High Voltage Vehicle Safety Systems".

### Automatic shutoff of the high-voltage on-board electrical system

To prevent people from coming into contact with high voltage, the high-voltage on-board electrical system is generally shut off automatically in the following cases:

- When the restraint systems are activated during an accident.
- When a short circuit is detected in the high-voltage on-board electrical system.
- When an electrical connector of the high-voltage on-board electrical system is disconnected.
- When an impact is detected during the charging process whilst the vehicle is stationary.

### High-voltage battery

#### DANGER

If you modify component parts of the high-voltage on-board electrical system or touch damaged component parts, you could receive an electric shock. Damage to the component parts of the high-voltage on-board electrical system may not be visible in an accident.

There is danger to life and limb!

After an accident, do not touch any high-voltage components, and never carry out modifications on the high-voltage on-board electrical system. Have the vehicle towed after an accident, and have the high-voltage on-board electrical system checked at a qualified specialist workshop.

#### WARNING

If the vehicle catches fire, the internal pressure in the high-voltage battery can exceed a critical value. In this case, combustible gas escapes via a bleed valve in the underbody. The gas can ignite.

There is danger to life and limb!

In the event of unusual odors, smoke, or scorch marks, interrupt the charging process at the charging station immediately. Vacate the danger zone immediately. Cordon off the danger zone at an adequate distance.

Contact a qualified specialist workshop.

#### WARNING

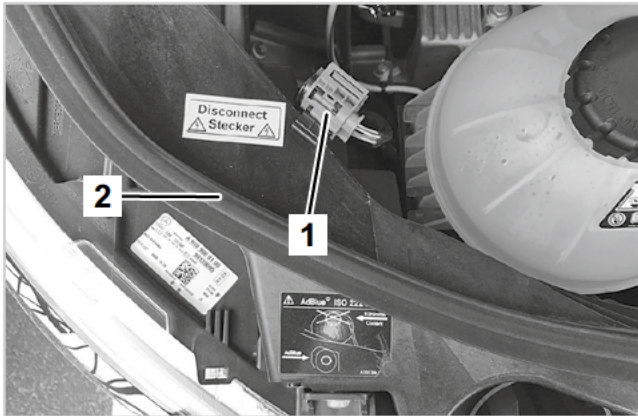
If the housing of the high-voltage battery is damaged, electrolyte and gases can escape. These are toxic and corrosive.

There is danger to life and limb!

Avoid all contact with your skin, eyes, or clothing. Rinse off splashes of electrolyte immediately with water and seek medical assistance without delay.

High-voltage disconnect device

The vehicle is equipped with a high-voltage disconnect device, the "high-voltage activation lock" switch (2), which can be used to shut down the high-voltage on-board electrical system. The "high-voltage activation lock" switch in the engine compartment is used by the qualified specialist workshop to disconnect the vehicle.



High-voltage disconnect device in engine compartment

- 1 High-voltage disconnect device (high-voltage activation lock)
- 2 Front-end assembly

**!** NOTE  
The high-voltage on-board electrical system should only be shut off by specially trained technicians during vehicle standstill. Otherwise, the high-voltage on-board electrical system could be damaged.

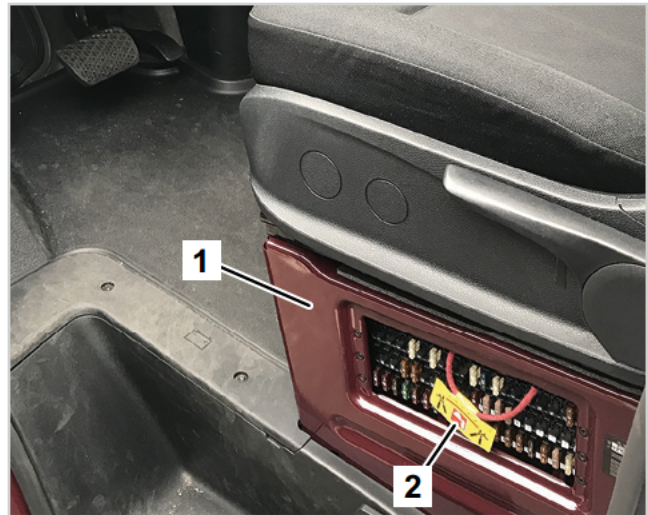
**!** NOTE  
Do not modify the high voltage disconnect device and its surroundings.

**i** You can find further information and specifications for manual shutoff of the high-voltage on-board electrical system in your vehicle's Operator's Manual and in the Guidelines for Rescue Services, or rescue cards for emergency services, see chapter 3.6.1 QR code rescue sticker (→ page 27).

High-voltage rescue disconnect device

**!** NOTE  
The high-voltage rescue disconnect device in the seat box of the driver's seat should only be used in an emergency by emergency services.

The high-voltage rescue disconnect device is marked with an information label and can be found behind the cover of the fuse box under the driver seat.



Location of high-voltage rescue disconnect device (extract from rescue card)

- 1 Seat box of driver s seat
- 2 High-voltage rescue disconnect device with information label



High-voltage rescue disconnect device information label (extract from rescue card)

**!** NOTE  
The high-voltage rescue disconnect device must only be used if the high-voltage disconnect device in the engine compartment cannot be used, because this step is irreversible.

**! NOTE**

Modifying the high-voltage rescue disconnect device and its surroundings is not permissible.

- i** You can find further information about the high-voltage rescue disconnect device in your vehicle's Operator's Manual and in the Guidelines for Rescue Services, or in the rescue cards for emergency services, see chapter 3.6.1 QR code rescue sticker (→ page 27).

### Shutoff of the high-voltage system in the event of accidents

When an accident is detected, the safety system can decide whether the high-voltage on-board electrical system should be shut off reversibly or irreversibly according to the severity of the accident.

- Reversible
  - Minor damage with no deployment of the airbag or impairment of the high-voltage on-board electrical system
  - The high-voltage buffer is discharged within a few seconds.
  - The vehicle can be restarted via the ignition.
- Irreversible
  - The power supply to the contactors is interrupted by a pyrotechnical element.
  - The high-voltage buffer is discharged within a few seconds.
  - The vehicle cannot be restarted by the operator.

**! NOTE**

The specifications for handling high-voltage components after an accident has occurred must be observed, see section on the high-voltage battery (→ page 11).

### 1.4.6 Proper use

Pay attention to the following information when you use the vehicle:

- The safety notes in the Operator's Manual
- The Chapter "Technical Data" in the Operator's Manual
- Country-specific legislation, guidelines, and licensing requirements

**! NOTE**

If you remove warning adhesive labels, you or others could fail to recognize dangers. Leave the warning adhesive labels in place.

### 1.5 Note on copyright

This Body-Equipment-Guideline and the text, illustrations, and data contained herein are protected by copyright.

This also applies for editions on CD-ROM, DVD, or other media.

If you have any inquiries, please send them by inquiry to:

**[www.upfitterportal.com](http://www.upfitterportal.com)**

### 2.1 Advice for Upfitters about the eSprinter

#### Technical advice on upfit compatibility

For base product related questions the Upfitter may use the inquiry section on the Upfitter Portal ([www.upfitterportal.com](http://www.upfitterportal.com)) by choosing “Product (Van Specifications, Dimensions, Options, Weights)” under the “Ask a Question” tab.

For Upfit and Body-Equipment-Guideline related questions the Upfitter may use the inquiry section on the Upfitter Portal ([www.upfitterportal.com](http://www.upfitterportal.com)) by choosing “Electrical, Mechanical or PSM” under the “Ask a Question” tab.

For Retrofitting an option and part requests please reach out to your local Mercedes-Benz Vans Dealer.

#### NOTE

Observe the specifications and information on this topic in the chapter of the same name in the Body and Equipment Guideline for Sprinter Vans.

## 2.2 Product safety and product liability

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

## 2.3 Guarantee of traceability

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

## 2.4 Trademarks

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

eDrive vehicles can be identified by the "eSPRINTER" identification plate on the rear-end doors and by the badge with the "eLECTRIC" lettering on the fenders; see the following figures:



Identification plate on rear-end doors



Badge on fenders

## 2.5 Quality system

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

## 2.6 Reprocessing of component parts - recycling

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

## High-voltage battery



### ENVIRONMENTAL INFORMATION

Have defective high-voltage batteries disposed of in an environmentally friendly manner. Contact a specialist workshop that is qualified for electric vehicles and that possesses the required expertise and tools in order to perform the necessary work. Mercedes-Benz recommends that you use a Mercedes-Benz Service Center for this purpose.

## 2.7 Accident prevention

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### 3.1 Vehicle and model designation

**i** For information on the position of the identification plates, see chapter 3.6 Vehicle identification data (→ page 27).

You can obtain information about the delivery capacity and registration requirements of the vehicle from your contact person at the Basic Vehicle Technical Consultancy Team, see chapter 2.1 Advice for Upfitters about the eSprinter (→ page 14).

The supplemental Body Equipment Guideline for eSprinter is valid for the following vehicle model designations of the eSprinter model series 907:

#### Versions and vehicle model designations

Version	Wheelbase [in   mm]	Vehicle model designation as per permissible gross mass in lbs   kg
		9,370   4000 <sup>1)</sup>
Cargo van (FKA)	170   4325	907.645

- 1) Diverging weight variants available ex factory through increased or decreased load, depending on battery capacity, equipment and national legal specifications. The code XG5 with 9370 lbs (4250Kg) is a standard for eSprinter.

#### **i** NOTE

Only 170" 113 kWh eSprinter is available at the point of publication of this supplemental guideline.

Please contact your local sales partner for information regarding the availability of other vehicle variants.

#### Explanation of vehicle model designations

Model series	Body	Tonnage	Wheelbase	Steering	Delivery condition
907 645 13	907 645 13	907 645 13	907 645 13	907 645 13	907 645 13
907 – Sprinter RWD	6 – Panel van	4 – 4.0 t	5 – 170 in   4325 mm	1 – Left-hand drive vehicle	3 – Complete



## Engine variants

### Engines via coding

Code	Type	Designation	Maximum performance [kW (hp)]	Rotational speed [rpm]	Torque [Nm]	Emissions level (code)
M5E	eSprinter	Electric motor	100 (136)	12500	400	-
M9E	eSprinter	Electric motor	150 (204)	12500	400	-

### Assignment of emission level

A purely electrically powered vehicle is emission-free locally. An exhaust system is not present on a purely electrically powered vehicle by design.

### Batteries via coding

Battery code	Type	Designation	Usable energy [kWh]	Assignment Engine code
E9V	eSprinter	High-voltage battery	113	M5E/M9E

### Special codes and body versions (optional)

Code	Version
D03	High roof
A50	Front axle with increased load capacity

### 3 Planning of bodies

#### 3.2 Model overview

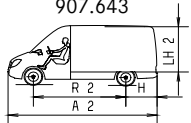
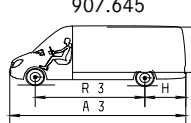
You will find detailed and additional drawings and dimensions under “Technical Info” on [www.upfitterportal.com](http://www.upfitterportal.com). Explanations of vehicle model designations and engine codes are contained in the table.

The following models are planned for the eSprinter model series 907:

**! NOTE**

Only 170” 113 kWh eSprinter is available at the point of publication of this supplemental guideline.

Please contact your local sales partner for information regarding the availability of other vehicle variants.

		4.0 t (IT9)	
		R2/A2	R3/A3
FKA	LH2	<p>907.643</p>  <p>Engine: M5E; M9E Battery:</p>	<p>907.645</p>  <p>Engine: M5E; M9E Battery: EV9</p>

Wheelbase [in   mm]	Load compartment height [in   mm]	Vehicle length, rear overhang (Front overhang 1021 mm) [in   mm]	Per- missible GVW <sup>3)</sup> [t]	Permissible FA load [lbs   kg]	Permissible RA load [lbs   kg]
		FKA			
R3 170   4325		A3 274.3   6967	63.8   1621		
	LH2 79.5   2020 (79.1   2010) <sup>1)</sup>		4.0	4100   1860	5688   2580
			4.0+A50 <sup>2)</sup>	4409   2000	5688   2580

- 1) Divergent values A2
- 2) Special equipment code A50: Front axle with increased load capacity
- 3) See the following table for deviating weight variants available ex factory depending on the model

Basic weight Code	Weight variants Code	Gross vehicle weight [lbs   kg]
IT9	XG5	9370   4250

### 3.3 Selecting the basic vehicle

In order to ensure safe operation of the vehicle, it is essential to choose the basic vehicle carefully in accordance with the intended use.

#### **!** NOTE

The Upfitter must take into consideration the payload remaining after the conversion when selecting the basic vehicle, so that it is adequate for the planned use case typical for the body.

More detailed information on the body variants is available in chapter 3.2 Model overview (→ page 18) or you can contact the department responsible (→ page 14).

**i** For further information regarding available option codes please see the Mercedes-Benz homepage:  
[www.mbvans.com](http://www.mbvans.com)

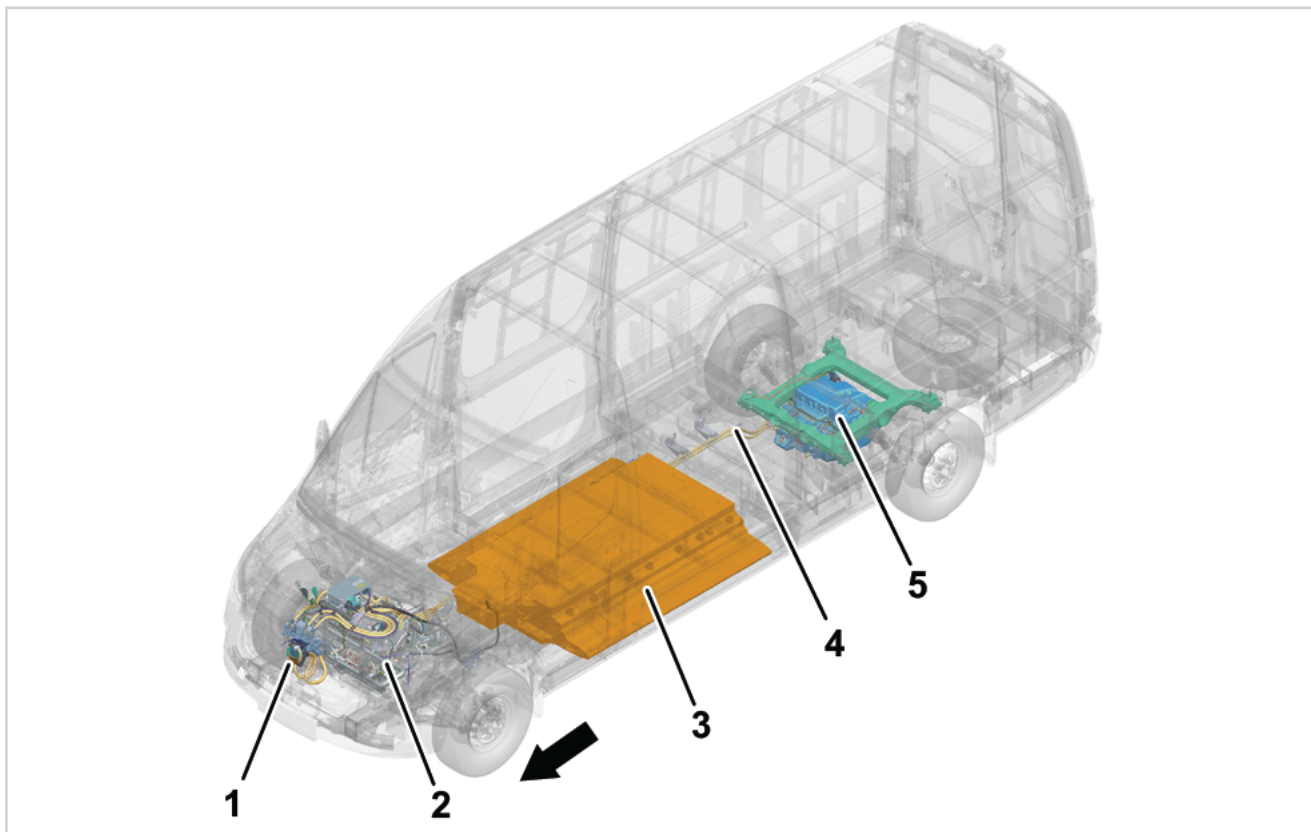
#### **eSprinter model series 907**

The vehicle can be ordered with a monovalent electric drive using codes M5E and M9E. The energy supply for the eSprinter comes from a lithium-ion (Li-ion) battery, hereinafter referred to as the high-voltage battery, installed in the underbody. The eSprinter model series 907 is equipped with a rear wheel drive (RWD) and an automatic transmission with a forward gear, reverse gear, neutral position and park position.

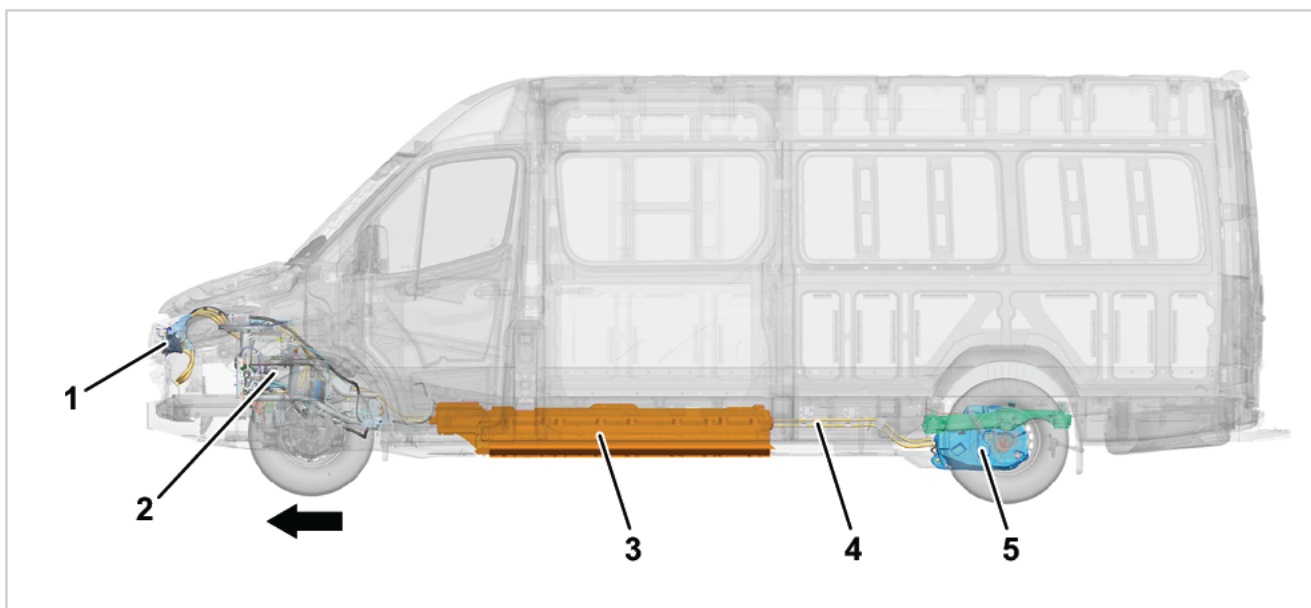
#### **Body**

The body-in-white is virtually identical to that of the classic Sprinter. The cab, load compartment, and door apertures for loading are unchanged. One exception is the underfloor area, where extensive alterations have been made to the body-in-white for fitting the batterie and supply lines. Furthermore, other body-in-white measures protect the components in the event of an accident.

Vehicle configuration of the eSprinter (code M5E/M9E)



Overall vehicle, isometric view



Overall vehicle, side view

- 1 Vehicle socket
  - 2 High-voltage major assembly carrier
  - 3 High-voltage battery with protective structure
  - 4 High-voltage lines (example)
  - 5 Electric motor with engine carrier
- Arrow Direction of travel

#### High-voltage battery of the eSprinter

**!** NOTE

All of the specifications and warnings regarding the high-voltage battery and high-voltage on-board electrical system must be strictly observed, see chapter 1.4 Operational safety (→ page 6).

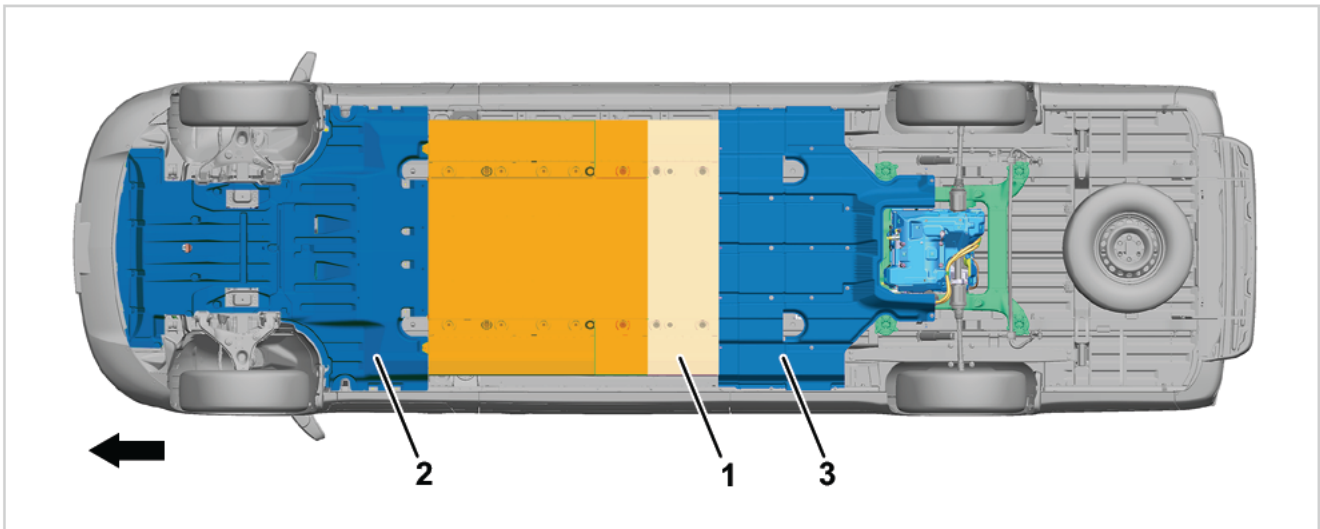
The energy storage unit for the vehicle drive is a high-voltage battery (lithium-ion with differing capacities), see chapter 3.1 Vehicle and model designation (→ page 16).

A 12 V battery supplies the remaining vehicle consumers, see chapter 8.3 Battery (→ page 42) and 8.4 Interfaces and electric lines (→ page 44).

You can find the parameters of the high-voltage battery in your vehicle's Operator's Manual and the technical sales information, or you can reach out via [www.upfitterportal.com](http://www.upfitterportal.com).

The high-voltage battery is arranged on the underside in a similar way to an underbody trim and is secured on the side to the longitudinal members of the substructure.

For further details, please use the 3D-Data (CAD) provided by Mercedes-Benz via [www.upfitterportal.com](http://www.upfitterportal.com).



Schematic diagram of the various sizes of the high-voltage battery (viewed from below)

- 1 High-voltage battery 113 kWh (Code E9V)
- 2 Front underbody trim
- 3 Rear underbody trim (for E9V)

Arrow Direction of travel

**!** NOTE

No modifications of any kind are permissible to or in the area of the high-voltage battery, to its mounts on the underbody, or to any high-voltage on-board electrical system components.

### Charging the high-voltage battery

Refer to your vehicle's Operator's Manual and the technical sales information for information on charging the high-voltage battery using the charger and available charging cables, or reach out via [www.upfitterportal.com](http://www.upfitterportal.com).

Also observe the specifications and information for connecting the charging cable to power sources in chapter 1.3 Vehicle safety (→ page 5).

### Position of vehicle socket

In the eSprinter model series 907, the vehicle socket is located in the center of the radiator grille behind the folding Mercedes star.



Position of the vehicle socket in the eSprinter model series 907

#### **!** NOTE

Modifications in the area of the vehicle socket and the associated system components are not permissible.

### Temperature management system

Vehicles with an electric drive have an intelligent and complex temperature management system that regulates the temperature of the drive components, the high-voltage battery, and the vehicle interior climate control.

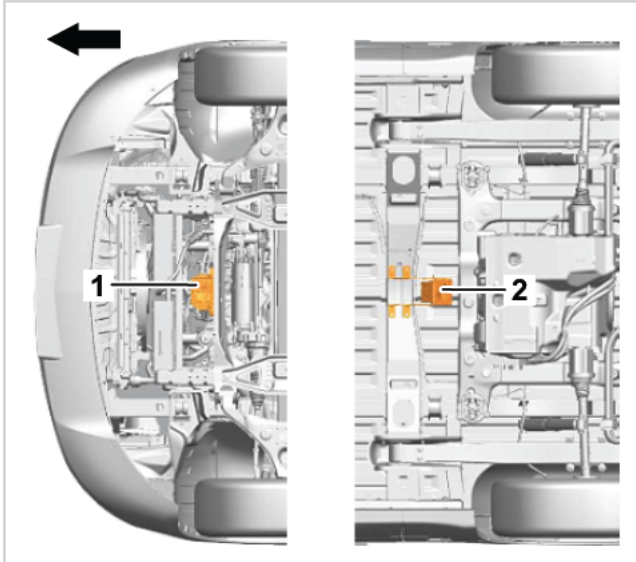
The lines and system components required for this are integrated in different areas of the vehicle and must be considered when installing attachments and modification parts. For details of the installation spaces affected, use the CAD data available from Mercedes-Benz.

#### **!** NOTE

Modifications in the area of the system components and the associated component parts of the temperature management system are not permissible.

#### Acoustic ambient protection

For safety reasons, a sound generator is installed as standard in the front and rear area as acoustic ambient protection (code J2A). This is to make bystanders aware of the eSprinter model series 907 as it approaches or whilst it is driving in low-speed areas. The positions of the sound generators are illustrated in the diagram below.



Position of the sound generators (schematic diagram)

1 Front sound generator

2 Rear sound generator

Arrow Direction of travel

The sound generator is active up to a vehicle speed of 18.6 mph (30 km/h) after every engine start and switches off automatically when the vehicle is stationary or at vehicle speeds greater than 18.6 mph (30 km/h). The rolling noise of the tires and the wind noises from the vehicle are audible at speeds above 18.6 mph (30 km/h), so artificial noises from the sound generator are no longer necessary. There is no way to adjust the sound or volume and it cannot be switched on or off. During forward travel, a neutral murmuring noise is generated that resembles the rolling noise of the vehicle; when reversing, a pinging noise is produced. The same sounds are used in all electrically driven vehicles from Mercedes-Benz Cars.

#### NOTE

The Acoustic Vehicle Alerting System is an EU-required (EU Regulation 540/2014) safety system. The European type-approval certificates for the eSprinter 907 series were granted based on the sound generator component part positions, as well as the sound output certification-relevant test results.


Modifications to the sound generator component part positions and to the component parts in their immediate vicinity, as well as any changes affecting the sound output, are therefore strongly discouraged.

The Upfitter is ultimately responsible for adherence to all FMVSS or other applicable regulations.



## Code table for standard and special equipment specific to the eSprinter model series 907

Code	Description
E9V	High-voltage battery 113 kWh
E5J	DC charging 50 kW
E6J	DC charging 115 kW
E8A	AC charging 9.6 kW
J2A	Acoustic ambient protection
MD3	Speed limit 75 mph (120 km/h)
M5E	Electric motor 100 kW
M9E	Electric motor 150 kW
E1P	Comfort drive program deactivated
E1Q	Maximum recuperation at all times

 For further information regarding available option codes please see the Mercedes-Benz homepage:

[www.mbvans.com](http://www.mbvans.com)

#### 3.4 Vehicle modifications

- i You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

##### **⚠ WARNING**

Modifications to the drive system may cause the system to stop functioning correctly. You could lose control of the vehicle.

There is risk of an accident and danger to life and limb!

Do not modify the drive system or any components of the high-voltage on-board electrical system.

##### **! NOTE**

All specifications and restrictions regarding vehicle modifications in the present Body-Equipment-Guideline for the eSprinter Model Series 907 must be observed, in particular in chapter 1.4 Operational safety (→ page 6).

#### 3.5 Dimensions and weight specifications

- i You can find information on this topic in chapter 3.2 Model overview (→ page 18) and in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

##### **⚠ WARNING**

Do not exceed the maximum unloaded vehicle weight (UVW limit) of 7840 lbs (3556Kg).

You can find further information in the Body-Equipment-Guideline for Sprinter Vans.

### 3.6 Vehicle identification data

- i** You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### 3.6.1 QR code rescue sticker



QR code rescue sticker on B-pillar on driver's side (example, schematic diagram)

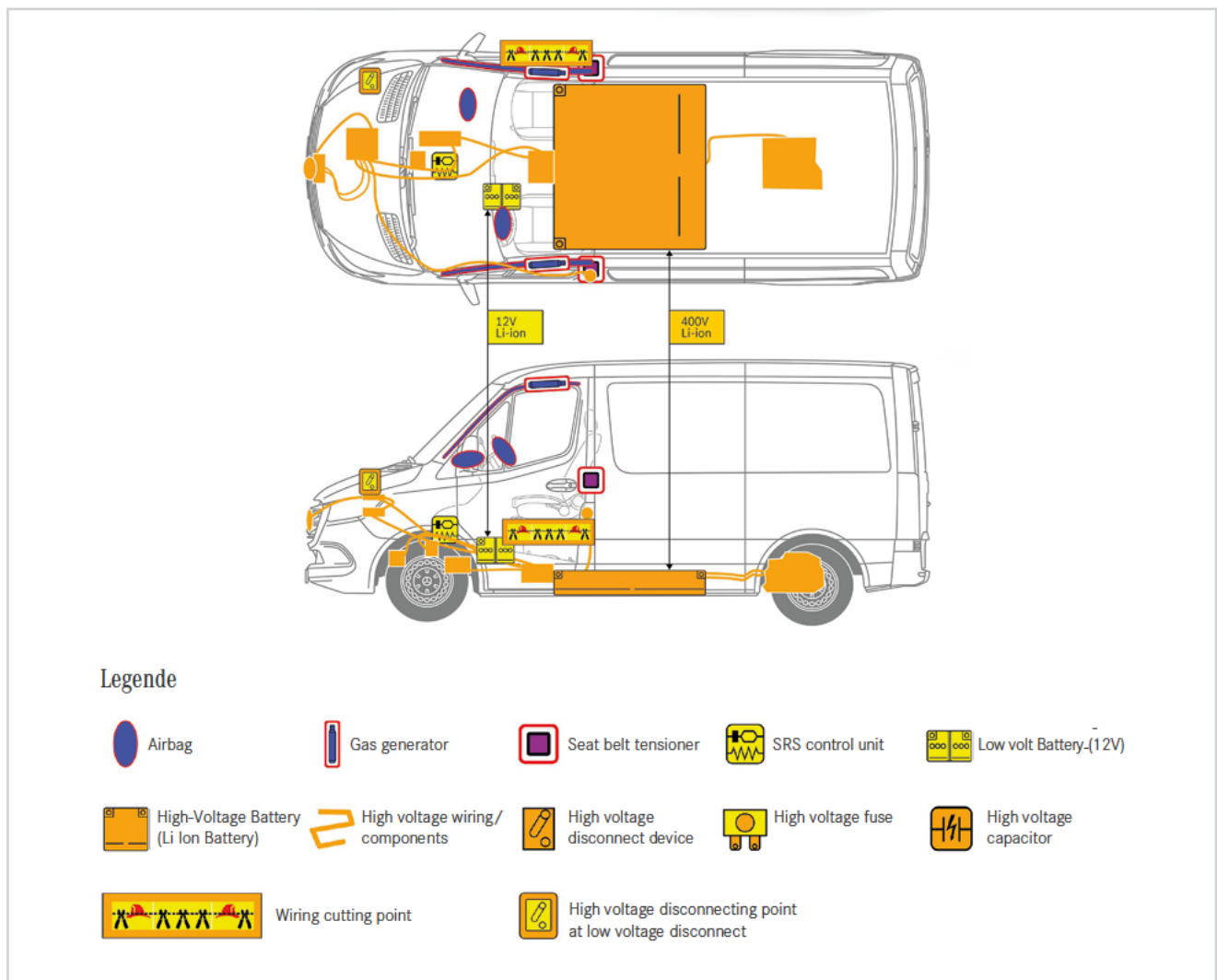
All vehicles are supplied with a QR code rescue sticker ex factory. The rescue stickers in the eSprinter model series 907 are located at the left and right B-pillars.

The current rescue card or rescue data sheets for the vehicle are displayed on the mobile terminal according to the language settings when the QR code on the sticker is scanned using a smartphone or tablet with an Internet connection. If the national language is not available, the system resorts to the English version. This means that rescue crews can immediately see where the airbags, battery, electric lines, pressure cylinders, and other component parts critical for the rescue are located. This lets them use rescue shears, for example, with low risk.

The rescue card corresponds to the vehicle in the state that it was in when supplied by Mercedes-Benz.

For component parts that are visible on the rescue card (see following illustration) and where changes to these parts – in accordance with the specifications in the existing supplemental guideline and the supplementary Body-Equipment-Guideline for the base vehicle – are permissible, if these parts are removed, modified, or added to in any way whatsoever, then the rescue stickers provided ex factory are rendered unusable.

In this case, the Upfitter must produce a new rescue card as per ISO17840-1 to 4 for the respective vehicle that illustrates this information. The rescue cards can be made available either online via a QR code, or can be provided in the vehicle in printed form (preferably behind the driver's sun visor).



Extract from the rescue card for the eSprinter model series 907.

**NOTE**

Observe the specifications governing the high-voltage on-board electrical system, high-voltage disconnect device, and high-voltage rescue disconnect device; see your vehicle's Operator's Manual, the complete rescue card from the Internet (see website below) and the information in chapter 1.4.5 High-voltage on-board electrical system (→ page 10).

If the QR code is destroyed in during the upfitting process by the Upfitter, but the rescue-relevant components remain unchanged, you must obtain a replacement via your Mercedes-Benz Service Partner and affix it to the B-pillars. Alternatively, the same partner can provide you with a printed version of the vehicle's rescue card.

Further information on the rescue sticker in Mercedes-Benz vehicles is available from:

<https://rk.mb-qr.com/en>



Rescue cards for individual model series are available at:

<https://rk.mb-qr.com/en/#rescue-card-selector>



### 3.7 Vehicle stability

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

### 3.8 Tires

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.
- ① Observe the specifications in chapter 4.2.3 Approved tire sizes (→ page 32).

### 3.9 Threaded connections and weld joints

#### 3.9.1 Threaded connections

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.
- ① Observe the other specifications in chapter 6.2.1 General information on the body-in-white (→ page 35).

#### 3.9.2 Weld joints

##### Welding on vehicles with an electric motor

#### ! NOTE

Cover adjacent parts of the drive system, including the battery system.

- ① Observe the other specifications in chapter 6.2.1 General information on the body-in-white (→ page 35).

### 3.10 Soundproofing

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

### 3.11 Maintenance and repair

#### ! NOTE

Always observe the regulations on high-voltage work safety when handling high-voltage vehicles.

- ① For other topics specifically concerning high-voltage vehicles, refer to the Mercedes-Benz Workshop Information System (WIS) or reach out via [www.upfitterportal.com](http://www.upfitterportal.com)

#### 3.11.1 Storing the vehicle

#### ! NOTE

Make sure that the high-voltage battery is not deep-discharged during lengthy non-operational time. This can result in damage to the high-voltage battery. To do this, check the state of charge at regular intervals and recharge the high-voltage battery if necessary via the AC on-board charger.

#### 3.11.2 Maintenance and storage of batteries

##### Notes on the on-board electrical system

The on-board electrical system supplies the power for the electric drive and for all electrical consumers and components in the vehicle.

The power supply in the vehicle is implemented via two batteries:

- 12 V battery
- High-voltage battery

#### **!** NOTE

Do not disconnect the 12 V battery, even in the event of lengthy non-operational time. Otherwise, the vehicle cannot monitor the state of charge of the high-voltage battery.

Please refer to the further information and specifications in the Operator's Manual of your vehicle.

#### **Safety note for the high-voltage battery**

Have all work on the high-voltage battery carried out at a qualified specialist workshop.

Observe the information on the high-voltage on-board electrical system (→ page 10) and instructions on the 12 V battery in the Body-Equipment-Guideline for Sprinter Vans.

#### **⚠** WARNING

If the housing of the high-voltage battery is damaged, electrolyte and gases can escape. These are toxic and corrosive.

There is danger to life and limb!

Avoid all contact with your skin, eyes, or clothing. Rinse off splashes of electrolyte immediately with water and seek medical assistance without delay.

#### 3.12 Special equipment

**i** You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### 3.13 Adhesive films on the vehicle exterior

**i** You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### 3.11.3 Work before handing over the modified vehicle

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**i** You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### 4.1 Limit values for the basic vehicle

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### **⚠ WARNING**

Do not exceed a maximum center of gravity (CoG) of 39 in/1000 mm measured from ground level when upfitting eSprinter vehicles.

#### 4.2 Limit values for the suspension

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

##### 4.2.1 Suspension

- ① Due to the special requirements for vehicles with electric drives, the suspension of the eSprinter model series 907 is already adapted accordingly in height and stabilization ex factory. Special equipment Stabilization Stage II (code CB8) is optional. Additionally, the special equipment Front axle with increased load capacity (code A50) may be included ex factory depending on the vehicle model designation and equipment or is available as an option. Furthermore, the special equipment for the suspension listed in the Body-Equipment-Guideline for Sprinter is not available for the eSprinter model series 907.

You can find details about the suspension selection and basic vehicle configuration in the product information system ADVANTAGES under "Suspension Design".

#### **! NOTE**

The special equipment Vehicle design for heavy duty (code B01), which is familiar from the Sprinter model series 907, is not available for the eSprinter model series 907.

#### 4.2.2 Permissible axle loads

#### **⚠ WARNING**

If the permissible axle loads are exceeded on vehicles equipped with ESP®, this system may no longer function correctly. Furthermore, any overloading may result in damage to the suspension and structural parts. This could cause the driver to lose control of the vehicle.

There is risk of an accident and danger to life and limb!

Adhere to the permissible axle loads as per the vehicle identification plate and vehicle registration documents.

#### **⚠ WARNING**

Driving safety is compromised if the permissible axle loads are exceeded. Handling characteristics and the steering and braking behavior can be significantly impaired.

There is risk of an accident and danger to life and limb!

Always comply with the permissible axle loads with payload including vehicle occupants.

#### **! NOTE**

The permissible axle loads for the relevant vehicle detailed in the vehicle documents and on the identification plate on the vehicle must be strictly observed; see Chapter 3.6 Vehicle Identification Data in the Body-Equipment-Guideline for Sprinter Vans.

- ① For further information please see: (→ page 18).

### eSprinter permissible axle loads

High-voltage battery	E9V	
Permissible gross mass [lbs   Kg]	9,370   4000	
Axle	Front axle	Rear axle
Permissible axle load [lbs   kg]	4100   1860 4409   2000 with code A50	5511   2500

A50 Front axle with increased load capacity (special equipment)

#### 4.2.3 Approved tire sizes

- i** You can find information about the tires and rims assigned to the vehicle model and any limitations:
- From your contact partner, see chapter 2.1 Advice for Upfitters about the eSprinter (→ page 14).

#### **i** NOTE

In order to meet the weight and speed ratings for the specific vehicle in use, the appropriate tires must be used. You can find out about all of the changes and all of the latest tire values from the Mercedes-Benz Vans Order Center, see chapter 2.1 Advice for Upfitters about the eSprinter (→ page 14).

Please also see: <https://www.mbusatirecenter.com/>

#### 4.2.4 Turning circle diameter

Comply with the international and national regulations for vehicle approval and registration.

These include:

- UN R 79
- European Union: 97/27/EC
- European Union: Regulation (EU) 1230/2012
- European Union: 96/53/EC

The size of your vehicle's turning circle can be found in the data sheets and 2D drawings (offer drawings). Both are available in the product information system ADVANTAGES (see Chapter 2.2.7 in the Body-Equipment-Guideline for Sprinter Vans) via [www.upfitterportal.com](http://www.upfitterportal.com).

- i** You can find information and additional specifications on the axles, steering, brake system, suspension, and wheel alignment in the chapters of the same name in the Body-Equipment-Guideline for Sprinter Vans.



#### 4.3 Limit values for the body-in-white

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### 4.4 Limit values for the engine peripherals and drivetrain

- ① You can find information on this topic in chapter 6.3 Engine peripherals and drivetrain (→ page 37).

#### 4.5 Limit values for the interior

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### 4.6 Limit values for the electrics and electronics

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### 4.7 Limit values for the additional assemblies

##### ! NOTE

Since the vehicle is not equipped with a traditional combustion engine, the retrofit of belt driven accessory components or fuel powered heaters is not possible.

#### 4.8 Limit values for the attachments

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### 4.9 Limit values for the body

##### ! NOTE

Not all versions of bodies available for the Sprinter model series 907 are available for the eSprinter model series 907.

You can reach out via [www.upfitterportal.com](http://www.upfitterportal.com) and request information via “Product and availability” inquiry.

- ① You can find further information on this topic in chapter 7 Design of bodies (→ page 40).

### 5.1 Brake hoses, cables and lines

- i You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### **⚠ WARNING**

Work carried out incorrectly on the brake hoses or cables may impair their function. This may lead to the failure of components or safety-relevant component parts.

There is risk of an accident and danger to life and limb!

Have all work on brake hoses and cables carried out at a qualified specialist workshop.

### 5.2 Welding work

#### **⚠ WARNING**

Welding work that is not performed correctly could lead to failure of component parts relevant to safety. It would then not be possible to rule out the risk of an accident.

There is danger to life and limb!

Have welding work carried out by a qualified specialist workshop.

- i You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

Also note the following for electric vehicles:

#### **! NOTE**

Electric welding is prohibited with high-voltage batteries installed!

- i Observe the other specifications in chapter 6.2.1 General information on the body-in-white (→ page 35).

### 5.3 Anticorrosion protection measures

- i You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

### 5.4 Painting and preservation work

#### **! NOTE**

For drying the paint, the object temperature must be maximum 86°F (30°C) and the drying time must be 30 min. At higher temperatures, the control units or other components may be damaged.

In the case of the eSprinter, it is not recommended that you dry the paintwork in the drying kiln because it is possible that the high-voltage batteries will not withstand this treatment in the drying kiln.

- i You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

### 5.5 Storing and handing over the vehicle

- i You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

## 6.1 Suspension

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.
- ① Observe the information in chapter 4.2.1 Suspension (→ page 31) for available special equipment.

## 6.2 Body-in-white and body

You can find general information on the body of the eSprinter in chapter 3.3 Selecting the basic vehicle (→ page 20).

You can find information on the correct installation and modification of the eSprinter below.

- ① You can find further information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

### 6.2.1 General information on the body-in-white

#### Welding and drilling on the body-in-white

##### **⚠ WARNING**

Welding work that is not performed correctly could lead to failure of component parts relevant to safety. It would then not be possible to rule out the risk of an accident.

There is danger to life and limb!

Have welding work carried out by a qualified specialist workshop.

##### **! NOTE**

Electric welding is prohibited with high-voltage batteries installed!

##### **! NOTE**

In addition to the specifications in the Body-Equipment-Guideline for Sprinter Vans, the following areas in which welding or drilling work must not be carried out are to be noted for the eSprinter:

- In the vicinity of all high-voltage components (high-voltage battery, high-voltage lines, electric motor, charging system, etc.).

#### Modifications in the underbody area (vicinity of the high-voltage battery)

##### **! NOTE**

Refrain from the following modifications in the underbody area for all vehicle variants:

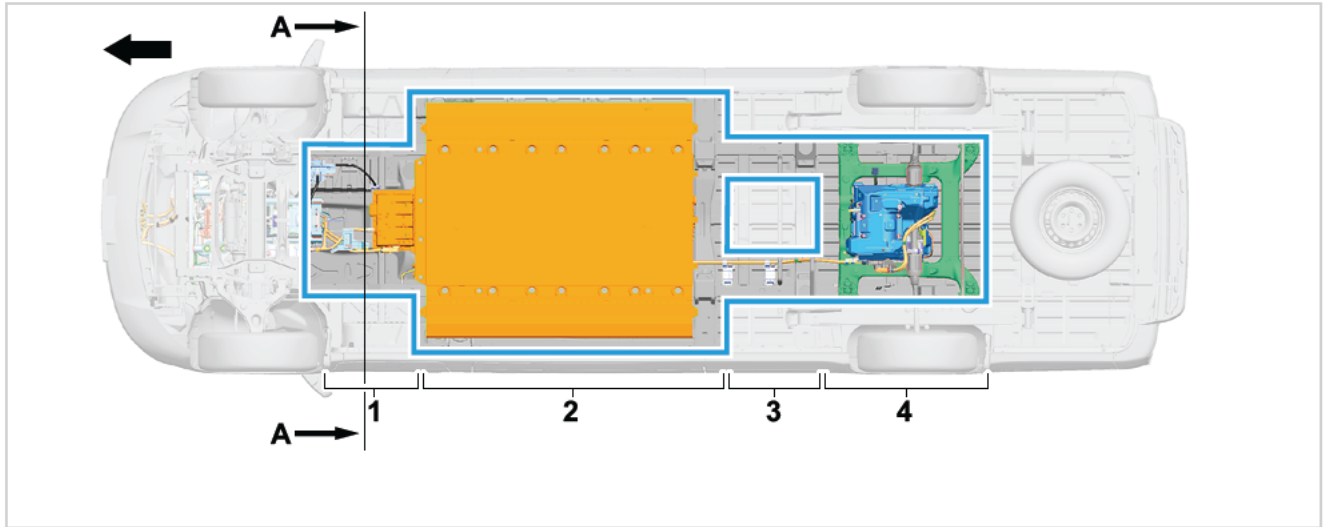
- Modifications in the immediate vicinity of the high-voltage battery or modifications which require the relocation of the high-voltage battery.
- Mounts on the vehicle floor or detachable parts that protrude into the area of the high-voltage battery or impede access to the high-voltage battery.
- Any attachments or modifications that may lead to damage of the high-voltage components (e.g. as a result of increased strain during vehicle operation or in damage cases).

##### **! NOTE**

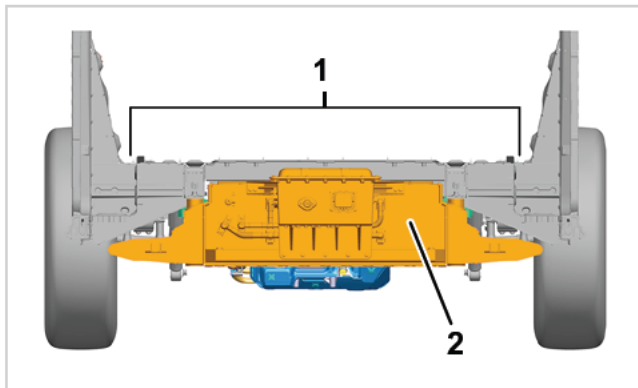
It is not permitted to drill, weld, or work with other methods that produce sparks at the load compartment floor, including the longitudinal members and side door sills, in the marked underbody area (see illustration below).

The mounting of detachable parts (e.g. side bars, cartridge lifts, or steps) is not permissible in the marked area.

**i** If you are planning modification work in this area, contact the Technical Consultancy Team during the planning phase, see chapter 2.1 Advice for Upfitters about the eSprinter (→ page 14).



- Blue Area of the load compartment floor in which body work is not permissible (schematic diagram)
- 1 Area of the high-voltage lines between the high-voltage battery and the high-voltage major assembly carrier
- 2 Area of the high-voltage battery (shown here with high-voltage battery 113 kWh code E9V)
- 3 Area of high-voltage lines between battery and electric motor, as well as main wiring harness (12 V)
- 4 Area of rear axle electric motor (code M5E/M9E)
- A - A Cutting plane of following diagram
- Arrow Direction of travel



Section A - A: Load compartment floor and high-voltage battery (schematic diagram)

- 1 Load compartment floor
- 2 High-voltage battery

**Modifications in the area of the B-pillar**

Avoid Mounting items in the B-pillar area. There is an exception for this when retrofitting the standard partition wall as a Mercedes-Benz genuine part and for Upfitter specific partition walls.

**NOTE**

To ensure that High Voltage components are not damaged during the installation of aftermarket partition wall, it is not permitted to install aftermarket partition walls which require drilling or mounting through the vehicle floor and the B-Pillar behind the driver seat in the area between the floor and the top of the B-Pillar charging port.

**NOTE**

The factory-installed tie-down eyes constitute a certified as-built configuration in panel vans. If tie-down eyes are removed from these vehicles, it must be ensured that an equivalent substitute is restored for securing loads as per the international requirements of ISO 27956.

## 6.3 Engine peripherals and drivetrain

- i** You can find general information on the drivetrain of the eSprinter in chapter 3.3 Selecting the basic vehicle (→ page 20).

### DC/DC converter and body manufacturer interface

#### **!** NOTE

Attachments to the DC/DC converter by the Upfitter are not permissible.

The terminal strip (code EK1) is available for connecting aftermarket electrical consumers, see chapter 8.4 Interfaces and electric lines (→ page 44).

### Modifications to the vehicle

#### **!** NOTE

All specifications and restrictions regarding vehicle modifications in the present Body-Equipment-Guideline for the eSprinter must be observed, in particular in chapter 1.4 Operational safety (→ page 6).

#### **!** NOTE

If work is carried out on a vehicle with an electric drive, the country-specific specifications regarding statutory protective equipment and the accident prevention regulations must be observed.

### 6.3.1 Fuel system

A fuel system is not present in a purely electrically powered vehicle by design.

### 6.3.2 Exhaust gas aftertreatment system

An exhaust gas aftertreatment system is not present on a purely electrically powered vehicle by design.

### 6.3.3 Exhaust system

An exhaust system is not present on a purely electrically powered vehicle by design.

### 6.3.4 Engine cooling

#### **!** NOTE

The value of the free cooling air inlet area of 14.8 dm<sup>2</sup> must not be changed.

### Climate control management system for the high-voltage battery

The vehicle is equipped as standard with an intelligent, water-based climate control management system. This keeps the high-voltage batteries within a temperature range of 77°F - 95°F (25°C - 35°C) wherever possible while the electric motor is active and during the charging process.

#### **!** NOTE

Modifications to the climate control management system are not permissible.

#### 6.3.5 Intake air system

An intake air system is not present on a purely electrically powered vehicle by design.

#### 6.3.6 Free space for major assemblies

**i** You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### 6.3.7 Propeller shafts

A propeller shaft is not present in the eSprinter model series 907 by design.

#### 6.3.8 Engine speed regulation

Engine speed regulation is not present in the eSprinter model series 907 by design.

### 6.4 Interior

**i** You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### **!** NOTE

The eSprinter is designed for vocational upfits and parcel delivery purposes.

In the event that the Upfitter intends to install rear seats into the eSprinter, it is mandatory for the Upfitter to initiate communication via [www.upfitterportal.com](http://www.upfitterportal.com) (Ask a Question - Upfitting: Mechanical) to seek information regarding the technical specifications and safety requirements that must be satisfied.

### 6.5 Attachments

**i** You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### **!** NOTE

Observe the specifications regarding modifications in the underbody area for the eSprinter due to high-voltage components, see chapter 6.2.1 General information on the body-in-white (→ page 35).

It is recommended to order or retrofit the load rails available as a special equipment option for mounting and attaching shelves (code VC4 and code V42).

You can find information on this topic in the chapter “Shelf system/vehicle interior installation” in the Body-Equipment-Guideline for Sprinter Vans

### 6.5.1 Trailer coupling


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**!** NOTE

The specifications from the vehicle registration and the identification plate on the maximum permissible trailer load, depending on the model and equipment, must be observed.

### 7.1 General information

#### General

-  You can find information on special versions in the respective chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### NOTE

Not all versions of bodies available for the Sprinter are available for the eSprinter.

For more upfit related information please reach out via [www.upfitterportal.com](http://www.upfitterportal.com)

#### NOTE

Observe the specifications regarding modifications in the underbody area for the eSprinter due to high-voltage components, see chapter 6.2.1 General information on the body-in-white (→ page 35).



## 8.1 General information

**⚠ DANGER**

The high-voltage on-board electrical system is under high voltage. When working on high-voltage component parts, you could receive an electric shock.

There is danger to life and limb!

In order to avoid risks, please observe the following:

- Do not tamper with high-voltage component parts or the orange cables of the high-voltage on-board electrical system.
- Do not touch high-voltage component parts or orange cables of the high-voltage on-board electrical system in vehicles involved in accidents.
- Do not touch damaged component parts or any damaged orange cables of the high-voltage on-board electrical system.
- Do not remove the covers marked with yellow warning adhesive labels on the component parts of the high-voltage on-board electrical system.
- Do not insert conductive parts into the charging cable connector or the charging cable socket.
- For safety reasons, only use charging cables that have been approved by Mercedes-Benz for use in this vehicle. Observe the additional specifications in your vehicle's Operator's Manual.

**! NOTE**

If work is carried out on a vehicle with an electric drive, the country-specific specifications regarding statutory protective equipment and the accident prevention regulations must be observed, e.g. the latest audit standard of DGUV Information 209-093 "Training for work on vehicles with high-voltage on-board electrical systems" as amended for Germany or the SAE J2344 "Guidelines for Electric Vehicle Safety".

For additional training please review the SAE PD291808 "High Voltage Vehicle Safety Systems".

- i** Mercedes-Benz AG recommends that you use a specialist workshop that is qualified for the eSprinter, see chapter 1.4.3 Qualified specialist workshop (→ page 8).

8.2 Electromagnetic compatibility (EMC)

**i** You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

8.3 Battery

The vehicle has two separate on-board electrical systems:

- A 12 V on-board electrical system for supplying factory installed consumers. When the vehicle is stationary with the ignition off, all the factory installed consumers are supplied by the 12 V on-board electrical system battery.
- A high-voltage on-board electrical system (400 V) for the vehicle drive.

When the ignition is switched on, the existing voltage from the on-board electrical system battery is checked and, as required, charged or boosted by the high-voltage battery via a DC/DC converter. Factory installed consumers continue to be supplied by the 12 V on-board electrical system battery.

8.3.1 12 V on-board electrical system battery

The 12 V on-board electrical system battery for supplying the factory installed consumers is located in the battery box in the center of the front area of the vehicle floor. When the vehicle is started, the high-voltage on-board electrical system is activated after a prior test carried out by the energy and battery management systems. The 12 V on-board electrical system, including the 12 V battery, is boosted and, if necessary, charged by a DC/DC converter that generates the charging voltage from the high-voltage on-board electrical system.

The following on-board electrical system batteries are available ex factory depending on the equipment (model AGM):

Series/optional	Code	Size	Capacity [Ah]
Series	ED1	H6	70
Optional	ED4	H8	92

In the event of high electricity demand and power tapping for additional electrical consumers, use an auxiliary battery, see chapter 8.3.2 12 V auxiliary battery (→ page 43).

**! NOTE**

The state of charge of the 12V Battery ED1 (optional ED4) is monitored and gets recharged automatically by the 400V High Voltage battery utilizing a DC/DC converter.

It is not permitted to utilize ED1 or ED4 for powering aftermarket electrical consumers while the High Voltage system is disengaged. (Vehicle is “Off”).

**! NOTE**

For the “Start/Stop” button functionality please review the operators manual.

Charging the on-board electrical system battery through external feed-in

**! NOTE**

External feed-in to the 12 V on-board electrical system battery is permissible as per the Operator's Manual only in a qualified specialist workshop.

Permanent connection of an external feed in to the 12V on board electrical system is not permitted.

Electrical aftermarket consumers are not permitted to be connected directly to the on-board battery.

If an Upfitter would like to utilize the on-board battery to power aftermarket consumers the terminals of EK1 have to be utilized.

**i** You can find further information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

**! NOTE**

Overview - Powering electrical aftermarket consumers:

1. Less than 25A are required and the vehicle is on:  
(High Voltage system is active):

For applications where power is required when the vehicle is "On", the upfitter can utilize the 12V battery ED1 or ED4, by connecting to Upfitter terminals of EK1. A direct connection to the terminals of ED1 or ED4 is not permitted. Aftermarket consumers connected to EK1 Terminal 2 (30T) have to have a quiescent load of less than 1 mA. For more information please review the Body-Equipment-Guideline for Sprinter - Model Series 907.

2. More than 25A are required and the vehicle is off:  
(High Voltage system is in-active):

For applications where power is required also when the vehicle is "Off", the Upfitter has to order the auxiliary battery E2I or E2M and connect directly to the terminals of the auxiliary battery including the installation of aftermarket fuses to ensure a safe operation of the upfitter installed electronics and the base vehicle.

**! NOTE**

The 12V auxiliary battery option E2I or E2M is required if electrical aftermarket installed consumers have to be powered while the vehicle is "Off" and stationary.

The cutoff relay E36 will automatically disconnect the on-board 12V battery from the auxiliary battery to prevent the on-board battery from draining.

Electrical aftermarket consumers have to be connected directly to the terminals of the auxiliary battery. A fuse must be installed between the electrical aftermarket consumer and the auxiliary battery.

**! NOTE**

When aftermarket electrical consumers are powered by the auxiliary Battery (code E2I/E2M), ensure that the permissible total current of 80 A in total across the battery cutoff relay is not exceeded. Take into account the charging current of the battery while the vehicle is on. (cockpit display "Ready").

- i** You can find further information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

### 8.3.2 12 V auxiliary battery

Available auxiliary batteries for the eSprinter model series 907 ex factory:

Code	Size	Capacity [Ah]	Installation location
E2I	H8	92	Front passenger seat box
E2M	H6	70	Engine compartment

The required battery cutoff relay (code E36) is installed automatically along with the auxiliary batteries.

### 8.3.3 Maintenance and storage of the battery

- i** You can find further information on this topic in chapter 3.1.1.2 Maintenance and storage of batteries (→ page 29).

### 8.3.4 Disconnection of vehicle electrical system voltage

**! NOTE**

Do not disconnect the 12V on-board battery if the vehicle is parked for a longer period of time. Otherwise the vehicle cannot monitor the state of charge of the high-voltage battery.

**! NOTE**

Do not disconnect the 12V on-board battery for longer than 5 days.

### 8.4 Interfaces and electric lines

- i** You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

#### **!** NOTE

Constructional modifications to high-voltage components, high-voltage lines, and equipotential bonding lines are not permissible.

Any interventions in the bus system (electronic vehicle network) are prohibited.

Only the terminal strip on the seat box of the driver's seat code EK1 or the auxiliary batteries code E2I/E2M are available for connecting electrical consumers.

An electric power tap by electrical consumers specific to the Upfitter from the DC/DC converter or other changes to the charging on-board electrical system are not permissible.

#### **!** NOTE

The DC/DC converter or DC/AC converter installed by the Upfitter in combination with the DC/DC converter available ex factory (see chapter 8.3.1 12 V on-board electrical system battery (→ page 42)) may cause faults due to voltage fluctuations in the 12 V on-board electrical system.

For installation of a DC/DC converter or DC/AC converter by the Upfitter, a check as to whether a certificate of compatibility has been granted must therefore be requested; see Chapter 2.1 in the Body-Equipment-Guideline for Sprinter Vans.

#### **⚠** WARNING

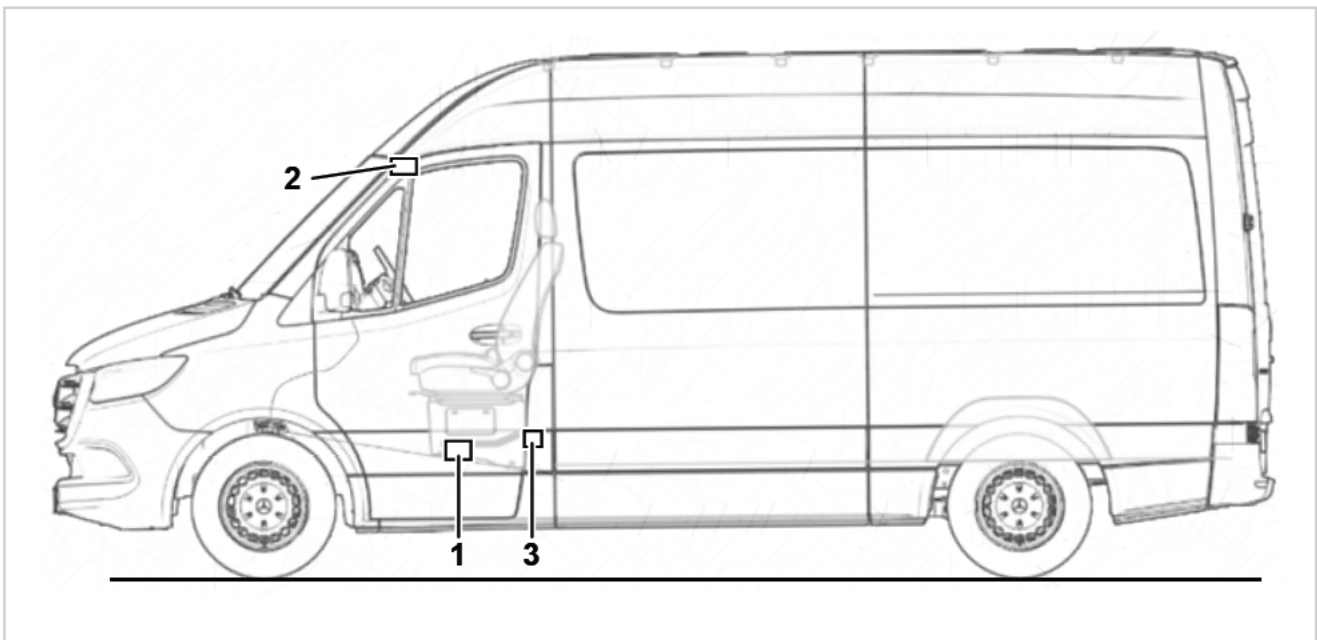
Any modifications to bus systems can lead to the failure of safety-relevant component parts. Damage to the vehicle can occur!

There is risk of an accident and danger to life and limb!

Do not interfere with the bus systems (e.g. by interrupting, extending, or "tapping").

#### 8.4.9 Interface overview

The electrical interfaces available as special equipment on the eSprinter model series 907 are depicted in the illustration below:



Schematic diagram: Electrical interfaces on the vehicle

	Code	Description
1	EK1	Terminal strip for the electrical connection on the seat box of the driver's seat
2	LC4	Pushbutton switch in overhead control panel (OCP)
3	E5M	Extension of PSM standard contact

## Code table for eSprinter model series 907 (additional special equipment)

Code	Description
ED8	Pre-installation of electrics for parameterizable special module
E2A	Tapping wire for ABH special signals in cockpit
E4A	Antenna interface for radio, navigation and cellular telephone system

**!** NOTE

Observe the legal specifications for the installation of lighting systems detailed in the Body-Equipment-Guideline for Sprinter Vans.

- i** You can find information on the following topics in the respective chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

**!** NOTE

Not all standard and special equipment available for the Sprinter model series 907 is available for the eSprinter model series 907.

For questions in regards of option codes please reach out via [www.upfitterportal.com](http://www.upfitterportal.com)

8.5 Lighting

8.6 Mobile communication systems

8.7 Electronic ignition lock (EZS)

8.8 Windows and doors

8.9 Driving assistance systems

8.10 Parameterizable special module PSM (MPM)

8.11 Signal acquisition and actuation module (SAM)

8.12 Pre-installation for liftgate

8.13 Continuous engine operation feature

The continuous engine operation feature is not present in the eSprinter model series 907 by design.

8.14 Automatic start/stop

An automatic start/stop is not present in the eSprinter model series 907 by design.

8.15 Electrical circuit diagrams

8.16 Telematics

8.17 Connectivity

8.18 Commissioning of control units

## 9.1 Center of gravity

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

### 10.1 Signal acquisition and actuation module (SAM)

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

### 10.2 Bulb ratings of exterior lighting

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.

### 10.3 Trailer coupling hole patterns

- ① You can find information on this topic in the chapter of the same name in the Body-Equipment-Guideline for Sprinter Vans.



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Abbreviation	Explanation
AC	Alternating current, up to 43.5 kW/400 V
YoM	Modification year
BEG	Body-Equipment-Guideline
AVAS	Acoustic Vehicle Alerting System
BM	Vehicle model designation
BR	Model series
CCS	Combined Charging System, international charging standard for battery-electric vehicles
CoC	Certificate of Conformity
DBE	Overhead control panel (OCP)
DC	Direct current, up to 170 kW/850 V
EMC	Electromagnetic compatibility
ESP®	Electronic Stability Program
EZS	Electronic ignition lock, see also EIS
HV	High voltage
ISO	International Organization for Standardization
NA	New production
PDU	Power Distribution Unit
PSM	Parameterizable special module
PTC	Positive temperature coefficient, relating to PTC booster heater or stationary heater
QR code	Quick Response Code, brand term for two-dimensional binary code
RWD	Rear Wheel Drive
SAM	Signal acquisition and actuation module
SBEG	Body-Equipment-Guideline(s)

