Paxster AS

OPERATING INSTRUCTIONS

Applicable for all Paxster vehicles Gen 2.2

15024646 Rev: A – 15.05.2023

Foreword

Notes on the operating instructions

The current original operating instructions are designed to provide sufficient instruction for safe operation of the Paxster electric vehicle.

The operator manual details different Paxster models. When you are operating and servicing the Paxster, make sure that the section applies to your Paxster model.

Our vehicles are subject to ongoing development. We reserve the right to alter the design, equipment, and technical features of the system. No guarantee of particular features of the Paxster should therefore be assumed from the current operating instructions.

Safety notices and text mark-ups

Indicates a very hazardous situation. Failure to comply with this instruction will result in severe irreparable injury or even death.

Indicates a very hazardous situation. Failure to comply with this instruction may result in severe irreparable injury and or death.

Indicates a hazardous situation. Failure to comply with this instruction may result in slight to moderate injury.

Indicates a material hazard. Failure to comply with this instruction may result in material damage.

Indicates a procedure or information for reducing the ecological footprint and acting in an eco-friendly manner.

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1 Correct use and application

1.1 General

The Paxster must be used, operated, and serviced in accordance with these operating instructions. All other types of use are beyond its scope of application and may result in damage to personnel, property or the Paxster vehicle.

1.2 Correct application

The Paxster electric delivery vehicle is designed to carry loads in two compartments, the front cargo area and the rear cargo area. Additional spaces for personal belongings are situated on both sides of the operator.

The maximum loads for the rear cargo area and front cargo area must not be exceeded.
Do not carry passengers.

1.3 Approved application conditions

The Paxster is designed to operate in the following conditions:

- Operation in industrial and commercial environments.
- Operation on public roads
- Permissible temperature range -20 °C to 40 °C.
- Operation only on secure, level surfaces with sufficient load-bearing capacity.
- Negotiating of slopes up to a maximum of 18 %.
- Do not travel across or at an angle on inclines of more than 18 %

WARNING

Use under extreme conditions.
Using the Paxster under extreme conditions can result in malfunctions and accidents.
Special equipment and authorization are required if the Paxster is to be constantly used in extreme conditions, especially in dusty or corrosive atmospheres.

The Paxster cannot be used in areas at risk of explosion.

Driving in winter conditions requires winter tyres and special attention to safe speed, braking distance, and steering capabilities.

Driving in severe weather with wind gusts of more than 80 km/h may lead to unstable driving behaviour.
Do not drive in weather conditions with wind gusts of more than 110 km/h. The vehicle might tilt.

WARNING

Depending on the height of the centre of gravity, driving on inclines of **25 %** may lead to tipping to the rear!

Depending on the height of the centre of gravity, driving across inclines of **30 %** may lead to tipping to the side!

WARNING

Do not drive under the influence of alcohol, drugs or medications.
Do not drive if you are wearing a plaster cast or orthosis / leg or arm brace.

1.4 Proprietors' responsibilities

For the purposes of the current operating instructions, the "operating company" or owner is defined as any natural or legal person who either uses the Paxster himself, or on whose behalf it is used. In special cases (e.g. leasing or renting) the proprietor is considered the person who, in accordance with existing contractual agreements between the owner and user of the Paxster, is charged with operational duties.
The proprietor must ensure that the Paxster is used only for the purpose it is intended for, and that danger to the life and limb of the user and third parties is avoided. Furthermore, the accident prevention regulations, safety regulations and operating, servicing and repair guidelines must be followed. The operating company must ensure that all users have read and understood these operating instructions.

NOTICE ⚠

Failure to comply with the operating instructions invalidates the warranty. The same applies if improper work is carried out on the Paxster by the customer or third parties without the permission of the manufacturer.

1.5 Adding attachments and/or optional equipment

The mounting or installation of additional equipment which affects or enhances the performance of the Paxster requires the written permission of the manufacturer. Local authority approval may also need to be obtained. However, local authority approval does not constitute the manufacturer's approval.

2 Vehicle description

2.1 Application

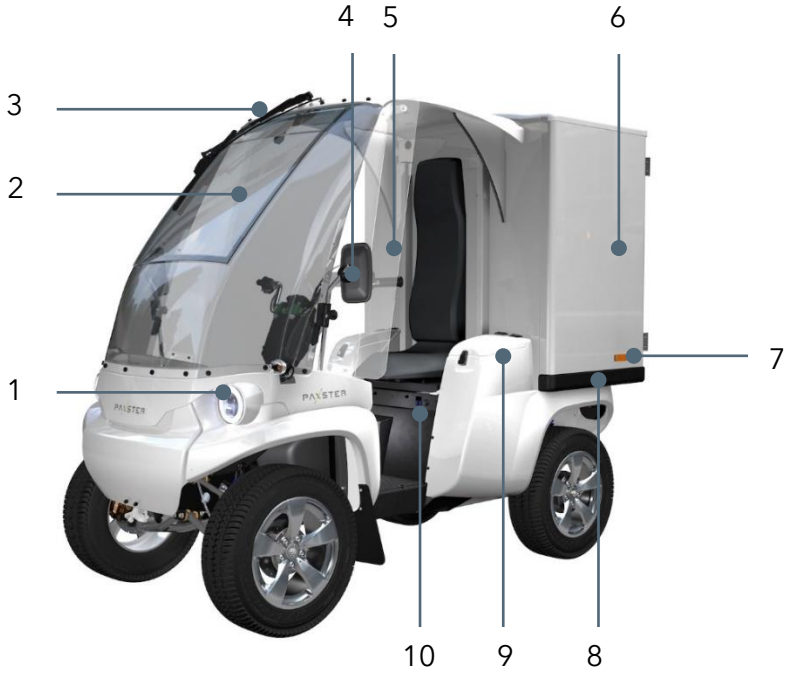
The Paxster Gen 2.2 electric vehicle is designed for last mile logistics and postal and packaging distribution, and in customized versions for other distribution and delivery methods such as hospital supply, food delivery, battery transport, and as a film camera platform.

The Paxster is designed for outdoor and indoor use and is road approved.

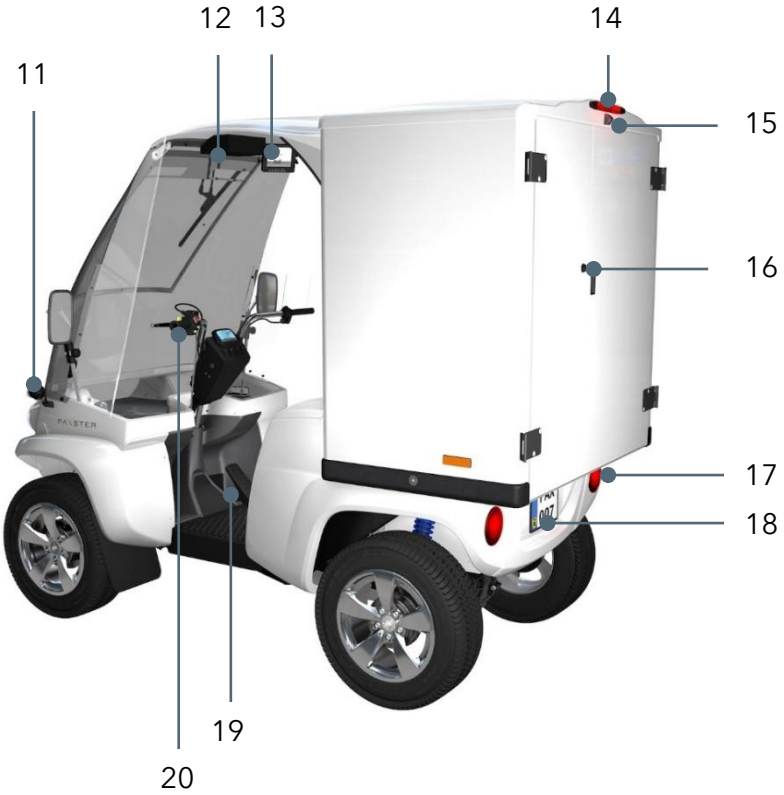
The maximum permissible load is stated on data stickers in the cargo cabinet and on the front cargo area.

2.2 Assemblies and functional description

2.2.1 Assembly overview



Item	Description
1	LED or halogen headlights
2	Heated windscreen
3	Windscreen wiper
4	Mirror
5	Wind deflector
6	Rear cargo compartment
7	Reflector
8	Door magnet
9	Side compartment
10	Jump start switch



Item	Description
11	Front direction indicator
12	Cabin light
13	Rear view display
14	3rd brake light
15	Rear view camera
16	Rear door opener and handle
17	Rear LED lights
18	Registration plate
19	Brake pedal
20	Steering bar

2.2.2 Loading areas

The Paxster provides three loading areas:

- Cargo compartment
- Front cargo area
- Side compartments (left and right)
- Optional side cargo compartment

Item	Description
6	Rear cargo compartment
21	Optional side cargo compartment
22	Front cargo area
23	Right side compartment
24	Left side compartment

2.2.2.1 Rear cargo compartment

The Paxster vehicles can be ordered with two different rear cargo compartments:

- Delivery type → rear compartment volume app. 750 litres
- Cargo type → rear compartment volume app. 950 litres

The rear cargo compartments can be accessed via two rear doors. The standard cargo compartment's load capacity is 190 kg. See chapter 7.8.1 for further information.

WARNING ⚠

The maximum loads for the rear cargo area and front cargo area must not be exceeded.

If your Paxster is a special build, the cargo capacity may deviate from above mentioned standard values. Please refer to the sticker on the vehicle and the special build manual if applicable.

2.2.2.2 Front cargo area

The front cargo area between the steering column and the windscreen is a customized area. Depending on the regional post box sizes or load type, this area may look different. The standard load capacity for the front cargo area is 50 kg. See chapter 7.8.2 for further information.

WARNING ⚠

The maximum loads for the rear cargo area and front cargo area must not be exceeded.

2.2.2.3 Right side compartment

This compartment accommodates the washer water tank for the windscreen wiper as well as the diagnosis plug. The resulting space can be used for lightweight personal belongings. See chapter 7.8.3 for further information.

The compartment can be locked with a key.

NOTICE ⚠

Only lightweight components must be placed here. Water hoses, cables and other components placed in this compartment will not be damaged by sharp items or heavy items.

Please note that this compartment is not waterproof, only water repelling.

2.2.2.4 Left side compartment

This compartment can be used to store personal belongings, tools, and safety gear.

The compartment can be locked with a key.

NOTICE ⚠

Only lightweight components must be placed here.

Please note that this compartment is not waterproof, only water repelling.

2.2.3 Functional description

2.2.3.1 Safety mechanisms

The Paxster is approved as 4-wheel light motorcycle and increases safety compared to other 2-wheel motorcycles.

Operators' safety:

- increased stability using 4 wheels
- crumple zone
- 3-point safety belt
- rigid seat belt structure as far as operator's head
- main windscreen with safety glass

Pedestrian safety

- soft plastic impact zone at front and on side compartments
- flexible plastic windscreen around the main windscreen
- optional warning beacon on roof
- reversing signal if ordered
- optional reversing camera

brake systems

The Paxster Generation 2.2 vehicle has 4 brake systems:

System	operates	Type
Brake pedal brake	All 4 wheels	Hydraulic
Brake handle brake	Front wheels	Hydraulic
Regenerative brake	Rear wheels	Electrical
APBU*	Rear wheels	Electromagnetic

*APBU: automatic park brake unit

NOTICE

The APBU is controlled by the motor controller and is automatically engaged if

- the speed is zero and no throttle is applied
- the speed is zero and no person is detected on the seat
- the speed is less than 5 km/h and no person is detected on the seat

Regenerative braking is applied automatically if:

- the brake handle or pedal is just slightly operated
- the throttle is released beyond the idle range
- on downslopes if the vehicle speed exceeds maximum allowed speed
- switching from forward to reverse with the throttle applied
- switching from reverse to forward with the throttle applied
- the speed is above 5 km/h and a severe drive train fault is detected

Drive system

The Paxster vehicle is propelled by a 3 phase 48 V electric PMAC motor acting on the rear wheels via a differential gear box. The maximum output power depends on the vehicle homologation variant:

Homologation variant	Maximum motor power
L6e-BU	6 kW
L7e-CU	7.48 kW

Steering

The Paxster is steered by the operator via the steering bar, like ATVs (Quads).

The steering system is a direct mechanical system without power steering.

Electrical system

The Paxster traction battery (LiFePo4) operates on nominal 48 V and powers the drive train via motor controller. The auxiliary battery (Lead acid / AGM) powers all other consumers with 12 V. Outlets and illumination are of 12 V DC type.

3 Technical specifications

3.1 Performance data

3.2 General

Dimension	L6e-BU		L7e-CU	
	Delivery	Cargo	Delivery	Cargo
Homologation variant	22	23	22	23
Top speed	45 km/h		60 km/h	
Maximum power	6 kW		7.48 kW	
Energy consumption*	84 Wh/km		107 Wh/km	
Seats	1 (centre seat)			

*The energy consumption depends on the driving pattern, load, weather and topography.

3.3 Dimensions

Dimension	L6e-BU		L7e-CU	
	Delivery	Cargo	Delivery	Cargo
Length	2290 mm	2365 mm	2290 mm	2365 mm
Width	1180 mm			
Height**	1860 mm	1880 mm	1860 mm	1880 mm
Wheelbase	1530 mm			
Track width	940 mm			
Front cargo area	0.59 m²			
Total loading volume	1,000 litres	1,250 litres	1,000 litres	1,250 litres

**If a warning beacon is installed on the roof, the overall height will increase depending on the height of the beacon.

3.4 Weights

Dimension	L6e-BU		L7e-CU	
	Delivery	Cargo	Delivery	Cargo
Max permissible weight	770 kg		845 kg	
Max front axle weight	270 kg		295 kg	
Max rear axle weight	500 kg		550 kg	
Weight excluding battery	325 kg	340 kg	325 kg	340 kg
Weight including battery with 75 kg operator	487 kg	502 kg	487 kg	502 kg
Max payload	240 kg			

NOTICE

The weight excluding the battery and the weight including the battery are valid for the standard configuration of the Paxster. Additional equipment and special cargo holds may increase the weight excluding the battery and the weight including the battery.

3.5 Battery data

Dimension	L6e-BU		L7e-CU	
	Delivery	Cargo	Delivery	Cargo
Chemistry	LiFePo4			
Voltage	48 V			
capacity				
Small battery	6.0 kWh			
Medium battery	8.1 kWh			
Large battery	10 kWh			

3.6 Range

Dimension	L6e-BU		L7e-CU	
	Delivery	Cargo	Delivery	Cargo
Small battery	40-60 km		35-50 km	
Medium battery	50-85 km		45-70 km	
Large battery	70-110 km		60-90 km	

3.7 Tyre types

Type	Tyre designation	comment
Summer	145/70 R13 155/70 R13	Use spacer Paxster art. no. 15015513 on rear axle if using aluminium rims
Winter without studs	145/70 R13 155/70 R13	
Winter with studs	155/70 R13	Use spacer Paxster art. no. 15015513 on rear axle
Tyre pressure	1.8-2.0 bar	

WARNING

All aluminium rims and tyres of size 155/70 R13 require spacers 15015513 on the rear axle. Failure to follow this instruction causes damage to the tyres.

NOTICE

Check your tyres at regular intervals. Minimum profile depth varies from country to country.

Country	Summer tyre	Winter tyre
Norway	>1.6 mm	>3.0 mm
Germany	>1.6 mm	>1.6 mm and snowflake marking
Austria	>1.6 mm	>4 mm

3.8 Noise emission level

Noise level during operation: 65 dB (A)

3.9 Electromagnetic compatibility (EMC)

The manufacturer confirms that the vehicles adhere to the limits for electromagnetic emissions and resistance in accordance with UN/ECE R10 as well as the standardized instructions contained therein.

WARNING

Medical equipment can be damaged by non-ionized radiation.
Electrical equipment on and within the vehicle emitting non-ionized radiation (e.g., wireless data transmission) can affect the medical equipment of the operator (pacemakers, hearing aids etc.) and result in malfunctions. Consult a doctor or the manufacturer of the medical equipment to clarify whether it can be used near or in the vehicle.

3.10 Specification acc. to radio equipment directive

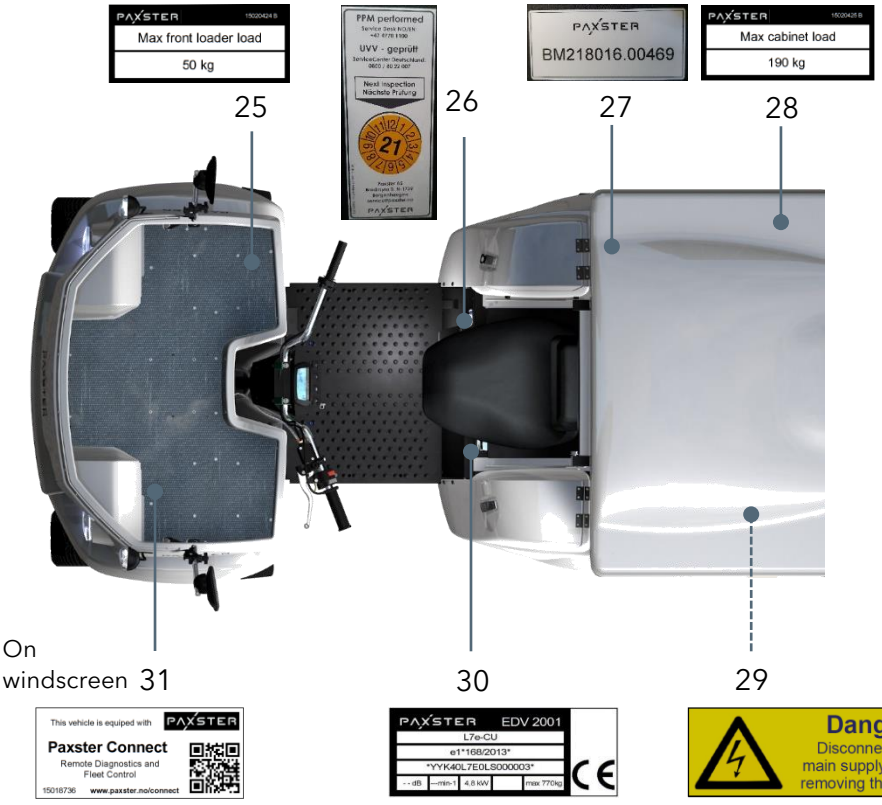
The table contains any components installed according to the European Directive 2014/53/EU. The table shows the affected frequency range and the emitted transmission power for each component.

Component	Frequency (range)	Transmission power
Keyless go transponder	433.92MHz	Complies with 199/5/EC (98/13/EEC)

Keyless drive system	868 MHz | 125 kHz | 125 kHz	
PaxCon GSM module	GSM1800: 1710-1785 MHz WCDMA: 1920-1980 MHz 880-915 MHz LTE FDD: 1920-1980 MHz 1710-1785 MHz 2500-2570 MHz 880-915 MHz 832-862 MHz 703-748 MHz	

4 Identification points and data plate

4.1 Identification points and data plates

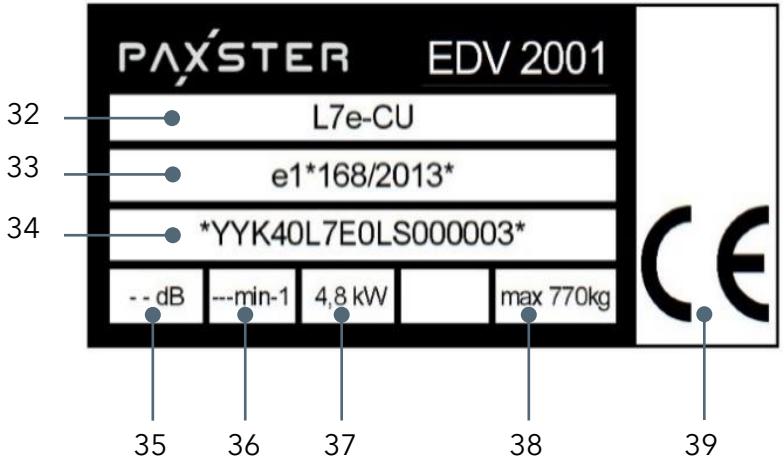


Item	Description
25	Max front load
26	Next service
27	Battery type plate
28	Max rear load
29	Danger high voltage
30	Vehicle identification plate
31	PaxCon information

4.1.1 Vehicle identification plate

Each Paxster has a unique vehicle identification number (VIN). This number is required for service requests and spare part orders. It can be found on the vehicle identification plate and on the right-hand side of the front end of the chassis.

The vehicle identification plate contains information about homologation and registration type, type approval identification and motor power.



Item	Description
32	Homologation type
33	EC type approval number
34	**V**ehicle **I**dentification **N**umber
35	Sound level stationary
36	Sound level @ engine speed
37	Maximum continuous rated power
38	Tech. permitted laden weight
39	CE conformity label

5 Transport and commissioning

5.1 Preparing for initial use

Upon delivery at the customer's site, the Paxster is usually on a pallet and wrapped in plastic film. To avoid deep discharging of the battery, the 12 V main fuse (F1) is not inserted into the fuse holder. The mirrors are not adjusted, and the seat is not in the operator's individual and optimal position.

NOTICE ⚠

The traction battery is pre-charged but must be fully charged before the vehicle is started up.

The Paxster may be driven from the pallet and up to 3 km prior to initial charging.

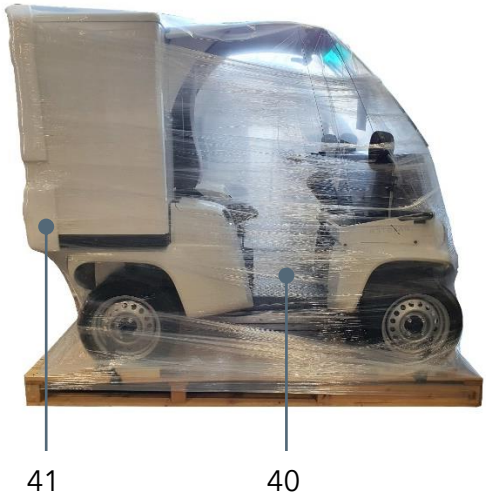
The battery indicator will not provide correct information until a complete charge cycle has been executed.

The indicated state of charge is higher than the actual state of charge!

Please refer to chapter 6.4 for further information about when the charging is finished.

5.1.1 Removing the wrapping

Paxster vehicles are mainly delivered on a wood pallet and are wrapped in protective film.



Item	Description
40	PE-LD film
41	PE foam corner protectors

Remove the film and ensure that it is properly recycled.

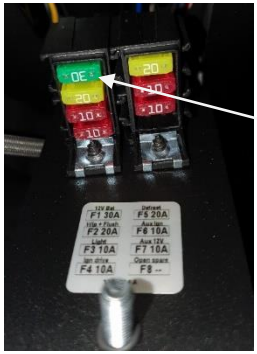
INFORMATION

Proper recycling of the plastic material is crucial for the environment. Please recycle it properly. Think of what best to do with the Scandinavian wood pallet.

5.1.2 Inserting the main fuse

For transport and long-term storage of the Paxster, the main 12 V fuse F1 is removed from the fuse box Pos. 42 on the left-hand side of the steering column to avoid draining the traction battery below a safe level

.



Item	Description
42	12 V fuse box

For initial startup and startup after long term storage, insert fuse F1 into its fuse holder.

To open the fuse box, unscrew the lock screw. No tools are required, the screw has a star head for getting hold of it.

5.1.3 Adjusting the mirrors

Loosen the mirror adjustment screw of the mirror rod to flip the mirror rod about 90 degrees from the side wall of the window.

Get hold of the black mirror cover and tilt the mirror horizontally and vertically until you can see the rear edge of the rear cargo compartment and the road at the side of the Paxster.

Secure the mirror adjustment screw manually.

Mirror adjustment screw

WARNING

Adjust the mirrors properly to see obstacles next to and behind the Paxster.
Make sure that you can see the cargo compartment side wall to avoid collisions when manoeuvring in narrow areas.
Note that objects in the mirror might appear further away than they are.

5.1.4 Starting the Paxster

Please refer to chapter 7 for safe preparation and start-up of the vehicle.

5.1.5 Removing the Paxster from the pallet

WARNING

Place the pallet on a level surface with sufficient load-bearing capacity. Ensure that there is sufficient room (>3.0 m) in front of the pallet to completely remove the Paxster from the pallet. Make sure that the area in front of the vehicle is clear of obstacles and persons. Paxster recommends using ramps to remove the vehicle from the pallet. Remove all belts securing the wheels to the pallet. Remove the wooden bars from the pallet to allow free movement. Do not exceed 3 km/h.

CAUTION

Do not use the brake pedal when the rear wheels are on the edge of the pallet to prevent the pallet from flipping upwards.

5.2 Lifting using jacks

Lifting the front of the Paxster using jacks requires some preparatory steps:

- Ensure that the Paxster is on a level surface

DANGER

The vehicle must be on a level surface with sufficient load bearing capacity to support the vehicle on the jack.

Ensure that the vehicle cannot roll / move while being lifted. Be aware that the brakes alone may not be sufficient. Always use wheel chocks of suitable size for the wheel size of the Paxster vehicle.

Always use stands to secure the vehicle in the lifted position.

Only use jacks and a stand with a safe working load that is greater than the vehicle weight specified in chapter 3.4.

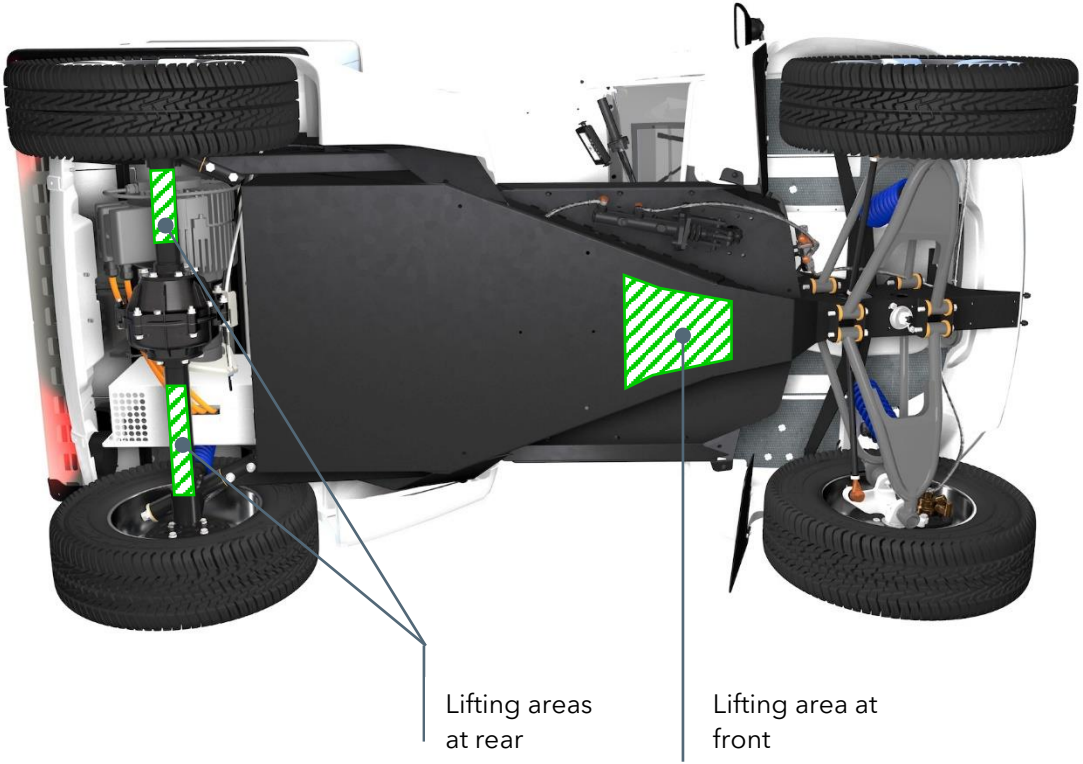
Only use equipment which is designed for lifting and supporting vehicles.

If your equipment shows signs of damage, leakages or is deformed, do not use it.

WARNING ⚠

Do not place a jack or stand in the red and white marked area below. This area is not designed to bear any loads. Damage may be caused to the vehicle, in this case the battery.

The designated lifting areas for jacks are shown below. Only use these for lifting and support stands.



If the vehicle front is lifted, the rear wheels need to be secured with wheel chocks, and vice-versa if the rear is lifted.

5.3 Lifting using a forklift

If required, the Paxster can be lifted from either side using a forklift.

CAUTION

Ensure that the rear cargo compartment is empty before lifting the Paxster.

The forks must be longer than the vehicle width (>1.2 m).

The forklift truck must have a sufficient load bearing capacity at a centre of gravity distance of 600 mm to lift the Paxster. Paxster recommends at least 800 kg @600 mm to cover all Paxster variants.

CAUTION ⚠

Be aware that the centre of gravity of the Paxster vehicle is close to the rear axle.

Use a tension strap between the floor of the Paxster and the fork below it.

Lifting must be carried out vertically and straight.

The boom must not be tilted away from the forklift truck while lifting a Paxster.

The boom must not be tilted more than 5° towards the forklift truck.

5.4 Transport

5.4.1 Transport on wheels

The Paxster vehicle can be driven in/on and transported by:

- Closed transporters / vans such as a front wheel drive 2021 Mercedes Sprinter or IVECO daily with sufficient internal height
- Closed box trailer
- Canvas covered trailers
- Open trailers
- Train
- Ship

CAUTION

Air transport is not permitted, and may lead to damage to the vehicle or components due to acceleration.

WARNING

Air transport in non-pressurized aircraft is particularly not permitted above 3,000 m (10,000 ft).

The Paxster can be driven onto the above-mentioned means of transport on its own wheels.

To secure the Paxster to the transporting vehicle, special wheel straps on all 4 wheels are highly recommended:

CAUTION ⚠

Due to higher acceleration during transport, do not transport loaded Paxster vehicles on trains and on ships.

Empty Paxsters may be transported by ship and train.

The maximum permissible transport speed of an unprotected Paxster is 80 km/h. Faster transport speeds require placing the Paxster in an enclosed cargo compartment.

5.4.2 Transport on a pallet

Paxster vehicles can be transported on oversize pallets.

Ensure that the vehicle is tied down to the pallet at all 4 wheels.

CAUTION ⚠

Charge the vehicle before transport and remove fuse F1, see chapter 7.13

Ensure that the pallet is slightly bigger than the vehicle to avoid collisions and transport damage.

Wrap the Paxster vehicle to protect it during transport.

6 Battery

6.1 Safety regulations for handling the traction battery

The Paxster traction battery is a LiFePo4 (LFP) battery. It contains between 6 and 10 kWh of energy. The nominal battery voltage is 48 V, and reaches about 53 V when fully charged.

WARNING ⚠

Unsuitable batteries which have not been approved by Paxster for the vehicle can be dangerous.

The design, weight and size of the battery have a considerable effect on the operational safety of the vehicle, particularly the stability and capacity. The use of non-approved batteries can lead to:

- Deterioration of braking characteristics
- Fire hazard during charging or regenerative braking
- Damage to the motor controller
- Damage to the battery management system (BMS)
- Loss of motor power

The following hazards can occur in the event of improper use or accidents:

- Physical damage:

  If the battery is deformed due to pressure (e.g. in an accident) mechanical damage may be caused to the battery housing. The battery cells may also be affected. In the event of cracked or penetrated battery cells, hazardous gases may be released. Heat can be produced in cases such as this which can melt plastic components around the battery cells.

- Short circuit

  Short circuiting may be caused in accident scenarios when battery poles are directly connected by a metal component or in case of mechanical pressure by internal cell short circuits. In both cases, the electrical energy stored within the affected cell will produce heat which may crack the battery cell housing and could release hazardous gases.

- Temperature effects

  High temperatures, e.g. those caused by fire close to the battery can cause the battery cells to crack and release hazardous gases. Plastic components of the battery may catch fire.

6.1.1 Fire hazard

WARNING

Burning LiFePo4 battery cells can be hazardous.

Physical damage, thermal effects, or incorrect storage in the event of a defect can result in fire. If the inside of LiFePo4 battery cells burns, the fire cannot be put out using conventional extinguishing methods.

- Avoid contact with combustion products.
- Use protective equipment.
- Use carbon dioxide extinguishers (Co2) to cool the fire and reduce the chemical reaction.
- Use carbon dioxide extinguishers (Co2) to cool the area around the battery and prevent the fire from spreading.

NOTICE

There are often regional / local regulations to be complied with when working, handling and transporting the Paxster traction battery.

Battery service personnel

All service and maintenance personnel require proper training and education prior to working on and with the traction battery.

Battery disposal

Batteries may only be disposed of in accordance with the national environmental protection regulations or disposal laws. The manufacturer's disposal instructions must be observed.

Paxster provides a repair and disposal service for the Paxster traction battery. Please contact your local Paxster service partner or Paxster AS for further information.

6.1.2 Extinguishing fires

WARNING

Contact with combustion products can be hazardous.

Fires produce combustion products.
Combustion is a chemical process by which a flammable material combines with oxygen under heat and light (fire).
The resulting combustion products can occur in the form of smoke, because of leaking fluids, escaping gases, debris as well as decomposition products of certain chemicals. These combustion products are substances which enter the body through the respiratory tract and/or the skin, where they can produce adverse effects, such as choking.

- Avoid contact with combustion products.
- Use protective equipment.

The following risks may occur:

– Hydrogen fluoride (HF) Hydrofluoric acid = extremely corrosive
– Risk of toxic substances produced by pyrolysis
– Risk of highly flammable gas mixtures.
– Other combustion products: Carbon monoxide & carbon dioxide.

6.1.3 Special protective equipment for firefighting

- Use self-contained breathing apparatus
- Use protective overalls (chem suits)

6.1.4 Additional firefighting information

Paxster traction batteries do not explode in the event of fire, deformation / crashes, penetration by metal objects and short circuiting. It is highly unlikely that the battery will burn. But fires around the battery may incorporate the battery. Short circuiting, wiring harness fires and physical damage may lead to toxic gases and liquids exiting the battery.

High priority should be given to cooling down the battery and binding toxic gases and fluids.

Water is sufficient for cooling down and binding toxic acid gases and water down acids.

Water is not sufficient to extinguish a burning battery.

Suitable fire extinguishing agent:

Carbon dioxide extinguisher (CO_2)

6.2 Safety regulations for handling the auxiliary battery

The 12 V lead battery contains dissolved acid, which is toxic and caustic. Avoid contact with the battery acid.

WARNING

- Dispose of used batteries in accordance with the regulations
- Do not let battery acid come into contact with skin or eyes. If necessary, rinse with plenty of water and seek medical assistance if required.
- Spilled battery acid must be neutralized immediately with plenty of water.
- Follow that national guidelines and regulations

6.3 Battery types and position

The Paxster vehicle is equipped with 2 batteries:

- Traction battery: 48 V for propelling the vehicle and charging the 12 V battery
- Auxiliary battery: 12 V for powering 12 V consumers such as light, outlets, switches, windscreen washer etc.

6.3.1 Traction battery

The Paxster vehicle is equipped with one of the following 3 battery sizes, all of which have the same protective battery housing.

Dimension	L6e-BU		L7e-CU	
	Delivery	Cargo	Delivery	Cargo
Chemistry	LiFePo4			
Voltage	48 V			
capacity				
Small battery	6.0 kWh			
Medium battery	8.1 kWh			
Large battery	10 kWh			

6.3.2 Auxiliary battery

Dimension	L6e-BU		L7e-CU	
	Delivery	Cargo	Delivery	Cargo
Chemistry	AGM			
Voltage	12 V			
capacity	18 Ah			

6.3.3 Battery locations

The 48 V LiFePo4 traction battery is located beneath the seat and can be accessed by removing the seat, including the cover plate.

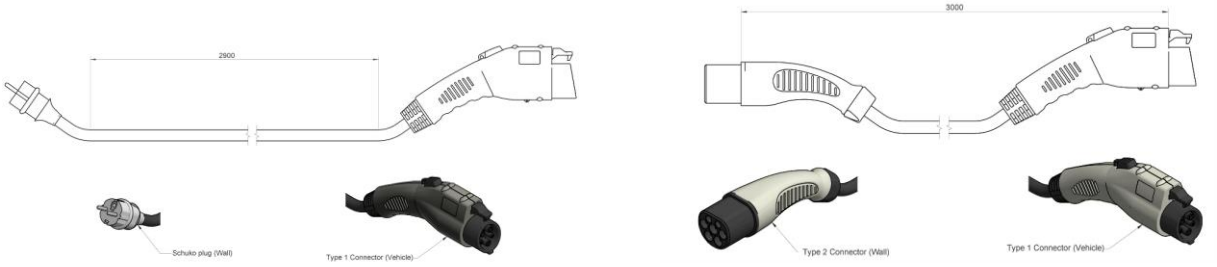
The 12 V lead acid auxiliary battery is located behind the vertical panel in front of the seat, close to the vehicle charging plug. It can be accessed by removing the vertical panel.

Item	Description
43	Traction battery LiFePo4 48 V
44	Auxiliary battery 12 V AGM

6.4 Charging the traction battery

Paxster Gen 2.2 vehicles are equipped with an onboard charger. The charger is connected to a grounded 230 V AC grid by one of the following original Paxster charging cables:

- type 1 to Schuko cable 3 m
- type 1 to Schuko cable 5 m
- type 1 to type 2 cable using a type 2 charging station
- type 1 to UK plug cable 3 m



In the event of charging errors, please refer to chapter 8.2 for troubleshooting.

CAUTION ⚠

Only connect the charging cable to grounded 230 V outlets!

The outlet must be capable of supplying 1200 W / 5.5 A for about 8 hours. The outlet should be secured by a 10 A fuse.

Please consult your in-house electrician for further information about local regulations regarding the charging of vehicles and an evaluation of the circuits which the Paxster will be connected to.

For new installations, Paxster recommends 3x2.5 mm² cables between the fuse and the outlet.

DANGER ⚠

Check the charging cable for defects before plugging it into the vehicle or 230 V outlet.

Damaged cables must not be used. Mark cables such as this as defective, and report the issue to your supervisor or electrician.

Charging cables are part of the 230 V system. Defective cables are life-threatening.

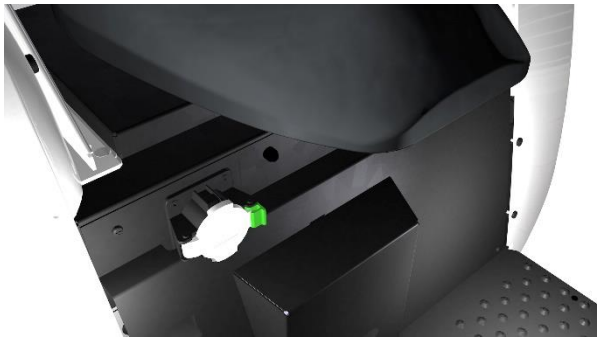
6.4.1 Connecting the vehicle to the grid

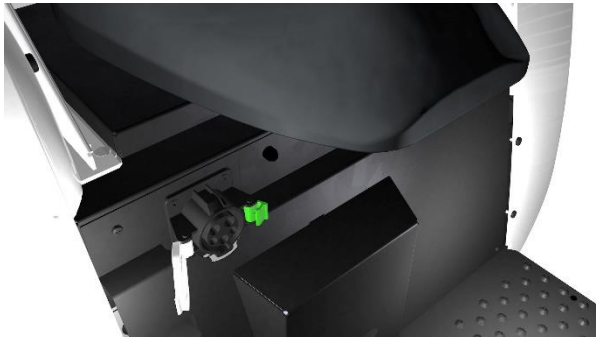
Always plug the charging cable into the 230 V outlet / type 2 charging point first.

Remove the rubber cap from the cable plug.

Open the charging port hatch (highlighted in white below) of the Paxster

- Push the lock mechanism (green) to the centre of the vehicle



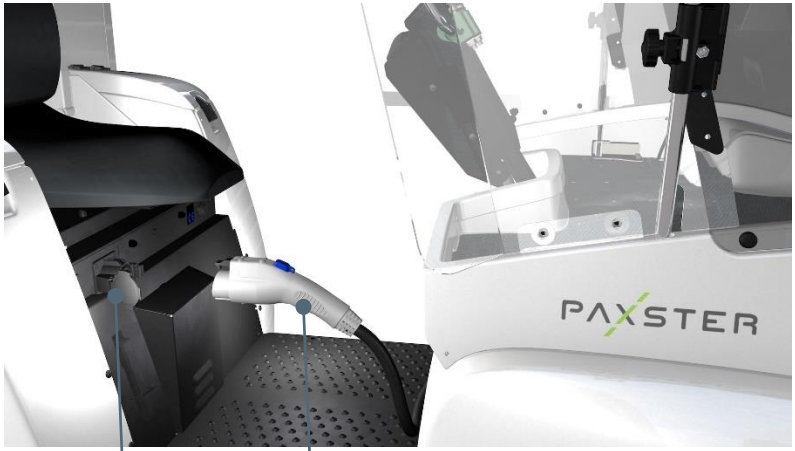


- The hatch is spring supported and opens automatically

NOTICE ⚠

If it is very dusty or wet, please clean / dry the charging port before charging

Insert the charging cable plug into the charging port of the Paxster



Vehicle charging port and hatch

Charging cable with cable plug

NOTICE ⚠

When inserting the cable plug or when disconnecting it, always get hold of the plug. Never pull on the cable. Pulling on the cable will damage the wires inside the cable and damage the sealing between cable and plug. The plug has a profiled hand grip area to use.

After inserting the charging cable plug into the vehicle charging port, the vehicle and the charger start communicating. After several seconds, they agree on the charging mode and the charging current.

The charging indicator (61) starts flashing, see chapter 7.2.5.

Observe the charging indicator flash code to ensure that the vehicle is charging and no charging error is present.

NOTICE ⚠

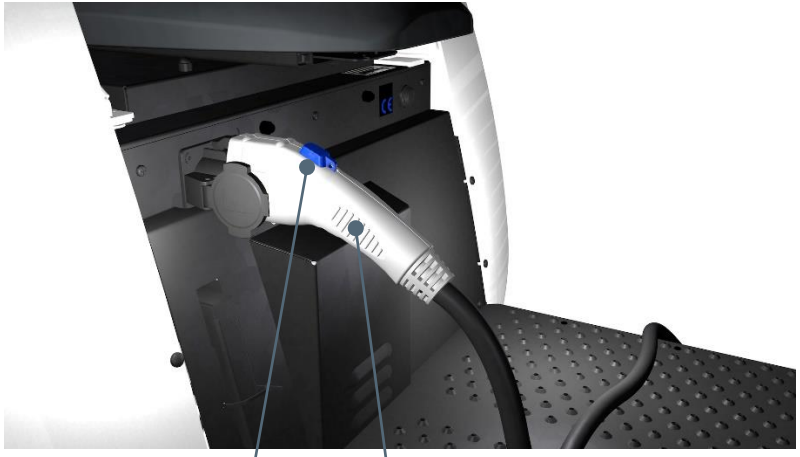
Some charging errors occur immediately after connecting a charger to the vehicle, and some occur after several seconds, e.g. if a component becomes hot or the grid voltage is unstable.

If possible, check the charging indicator (61) after 2 minutes for early detection of charging errors. For charging error identification, see chapter 7.2.5

6.4.2 Disconnecting the charging cable

To disconnect the charging cable plug from the vehicle:

- Get hold of the charging cable plug
- Press the release button of the plug
- Pull the plug out of the vehicle charging port
- Close the vehicle charging port hatch
- Store the cable safely



6.5 Charging the auxiliary battery

The 12 V auxiliary battery is usually charged by a vehicle internal DCDC converter and does not require external charging.

The internal charging will be interrupted automatically if:

- The 12 V battery fails
- The internal charging power exceeds 600 W
- The DCDC converter gets too hot (resets itself after cooling down)
- The 48 V traction battery is drained below a certain level

The 12 V system is required to start up charging the traction battery. If the traction battery is drained or deep discharged, the 12 V system must be established first to start up the BMS (battery management system), allowing communication between traction battery and charger.

6.5.1 Forced internal charging

In case of a discharged traction battery, the DCDC converter (48 V to 12 V) can be forced operational by pressing the jump start switch (highlighted green in the figure below) and keeping it pressed for a while. The DCDC converter will charge the 12 V battery for as long as it is pressed.

Item	Description
10	Jump start switch

NOTICE

Forcing the DCDC to charge the 12 V battery will also drain the traction battery. Only force the DCDC to charge the 12 V battery as long as is necessary to establish charging of the traction battery.

If the vehicle is not charging or the display does not start up when the vehicle is switched on with the ignition key, please follow the procedure below.

Procedure:

- Connect charging cable to the vehicle
- Press the jump start switch and keep it pressed for about 20 sec.
- Keep it pressed and connect the charging cable to the 230 V grid / charging station
- Check whether the charging symbol in the display starts to blink (2 times, 3 times or 4 times is okay, fast flashing means charging error)
- If the charging symbol blinks, release the jump start switch and check for an additional 20 sec whether the symbol continues to blink.
- If it stops, press the jump start switch for an additional 1-2 minutes and recheck the blinking symbol after releasing the jump start switch

6.5.2 External 12 V charging

The 12 V battery can be charged by an external charger after removing the vertical cover below the seat.

This procedure requires tools and technical knowledge.

Required charger specification:

- 12 V
- Designed for lead acid and AGM batteries

WARNING

Ensure that the + and – cables are correctly connected. Polarity reversal can lead to fire, explosion, and acid vapours. Only use chargers designed for vehicle batteries and suitable for AGM batteries.

7 Operation

7.1 Safety regulations for operating the Paxster vehicle

Driver authorization

The Paxster vehicle is road legal and requires an appropriate driver's license. Please consult your local Paxster dealer or the registration administration for detailed information about the required driver's license type.

The following drivers' licenses are usually required within the EU:

Vehicle registration category	Driving license class
L6e-BU	AM, B or higher
L7e-CU	B or higher

Operator's rights and responsibilities

The operator must be informed of his duties and responsibilities and be instructed in the operation of the vehicle, and must be familiar with this operating manual. The safety equipment that is required by the local traffic regulations must be provided.

Prevention of unauthorized use

Do not allow unauthorized persons to drive the vehicle. Make sure that the operator is trained and has the required driver's license.

Do not leave the key in the ignition lock when leaving the vehicle unattended.

Use the key fob to lock the vehicle when leaving it to prevent unintended use by unauthorized persons.

Damage and faults

The supervisor must be informed immediately of any damage or faults to the vehicle or attachment. Vehicles which are unsafe for operation (e.g. wheel or brake problems) must not be used until the faults have been rectified.

Repairs

The operator must not carry out any repairs or alterations to the truck without authorization and the necessary training to do so. The operator must never disable or adjust safety mechanisms or switches.

Safety on the road

WARNING

Do not use mobile phones when driving the Paxster vehicle.

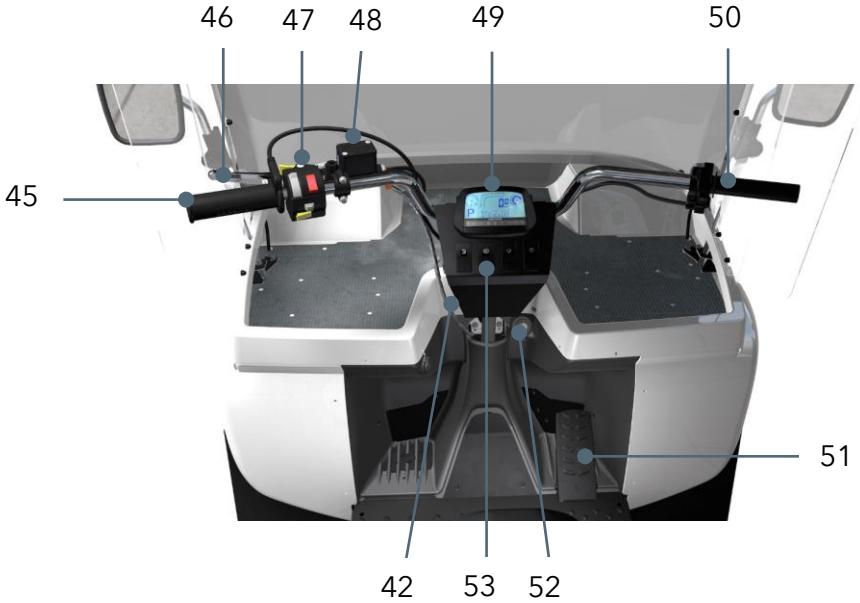
Use the safety belt.
For last mile delivery services: Make yourself familiar with the national regulations for the use of seat belts in postal and last mile distribution.

Do not drive in severe weather conditions → see chapter 1.3

Adjust the mirrors and the seat in accordance with your size.

7.2 Display and controls

Operators' workspace controls overview:



Item	Description
45	Left handle (optionally heated)
46	Brake handle
47	Left-hand control unit
48	Brake handle reservoir
49	Main instrument panel
50	Throttle (optionally heated)
51	Brake pedal
52	Ignition lock
53	Switchboard
42	12 V fuse box

7.2.1 Left handle

The left handle can be equipped with an optional heated grip to keep your fingers warm in cold weather conditions.

The heated grip (together with the right-hand side heated grip) is activated by pressing down the lower end of the defrost switch (78) see chapter 7.2.11 for further information about the switch.

It will provide heat for 15 minutes and deactivate automatically to save energy. Set the defrost switch to "OFF" and back down to "heated grip" to activate for a further 15 minutes.

CAUTION ⚠

Do not activate the heated grip during the summer. It can get very hot, and the material of the grip may be damaged.

INFORMATION ⚠

Use the heated grips sparingly to save energy, but use them as often as it is required to make your workspace comfortable.

7.2.2 Brake handle

The left brake handle is an additional brake operating device in addition to the brake pedal, which is the main service brake system. The brake handle only operates the front brakes. → see chapter 7.11.2 for further information.

This brake lever is supplied with brake fluid from the small brake handle reservoir (48) on the left-hand side of the steering bar. → see chapter 7.2.4

INFORMATION

Use the regenerative brake = motor brake by adjusting the throttle to 0-5 % or 15-99 %. Slowing down the vehicle using the throttle charges the battery and avoids brake wear.

7.2.3 Left-hand control unit

The direction indicator, the full beam lights the warning lights, the horn, and the reverse gear are operated using the left-hand control unit.

Item	Description
54	Reverse switch
55	Full beam switch
56	Warning lights switch
57	Direction indicator switch
58	Horn switch

54 reverse switch

Press and hold the reverse switch to reverse the vehicle. If your vehicle is equipped with a warning buzzer, a reverse signal will be activated as soon as you press the reverse switch.

Use the throttle as usual to start moving the vehicle.

Set the throttle to zero and release the reverse switch to stop reversing.

NOTICE

If you release the reverse switch and keep the throttle in any position other than zero, the vehicle will slow down and gently increase the torque in the forward direction, even if the throttle is set to 100 %. This is a safety feature, and reduces wear and tear on the gearbox, the motor, and the axle components.

If you are driving in the forward direction and press the reverse switch, the vehicle will gently slow down and slowly accelerate in the reverse direction, even if the throttle is set to 100 %. This is a safety feature, and reduces wear and tear on the gearbox, the motor, and the axle components.

55 full beam switch

Move the switch forward to activate the full beam. The full beam indicator (60) lights up to show that the full beam has been activated.

Pull the full beam switch towards you to deactivate the full beam. The light will switch back to the low beam.

NOTICE ⚠

The low beam will automatically be activated when the ignition is switched on. Only old Paxster vehicles have a separate low beam switch below the main instrument panel.

Follow the legal regulations of your country for the use of full beam.

56 warning lights switch

The warning light switch activates all direction indicators. Press in the top side of the switch to activate the warning lights. Both direction indicator LEDs on the main instrument panel will flash to indicate activation of the warning lights.

NOTICE ⚠

The warning lights can be activated with the ignition on, or with the ignition lock set to “parking light position”. See chapter 7.2.6 for ignition lock positions.

57 direction indicator switch

To activate a direction indicator, move the switch to the required direction to be indicated. Move the switch to the right to activate the right direction indicators, and move it to the left to activate the left direction indicators.

To deactivate the indicator, press the switch.

NOTICE ⚠

Pressing the switch will deactivate the direction indicators.

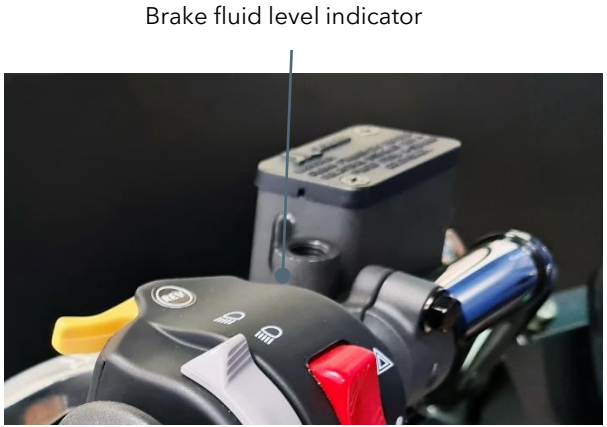
58 horn switch

Press the horn switch to activate the acoustic signal for warning others. Test the horn before starting a trip to ensure that it is working properly in case you need it.

7.2.4 Brake handle reservoir

The brake handle reservoir feeds the brake handle and the brake line down to the s-block with brake fluid.

The brake fluid level can be checked through the indicator glass on the left-hand side of the reservoir. The maximum level is at the top end of the glass, and the minimum level is at the bottom end of the glass.



To refill with DOT4 brake fluid, unscrew the top-lock and temporarily remove the rubber seal.

WARNING ⚠

Wear protective clothing when working with brake fluid. Brake fluid is a hazardous substance.

7.2.5 Main instrument panel

The main instrument panel (49) displays the speed, motor temperature, state of charge, mileage, and drive status on the multi-functional display area. Several warning and indicator lights can also be found below the multi-functional display area. The two “reset” and “mode” switches allow you to browse through different display modes and settings. The main instrument panel is backlit

WARNING

Do not browse the main instrument panel or carry out changes to settings while driving. Focus on the road ahead!

Main instrument panel indicators:

Item	Description
59	Left direction indicator LED
60	Full beam indicator
61	Charging indicator
62	Rear door open warning
63	Seat switch indicator
64	Regenerating indicator
65	Fault indicator
66	Brake fluid indicator
67	Right direction indicator LED

59 | 67 direction indicator control LED

The green arrows flash for as long as the direction indicator on the left control unit (47) is active.

Both direction indicators flash if the warning lights of the vehicle have been activated using the warning light switch of the left-hand control unit (47)

60 full beam indicator

This indicator is active when the full beam is activated on the left-hand control unit (47).

61 charging indicator

The charging indicator flashes if an original Paxster charger cable is connected to the vehicle and 230 V supply. The flash codes indicate the charging mode and potential charging problems.

NOTICE ⚠

Always wait for a few seconds after connecting the charging cable to the vehicle and 230 V grid to confirm that

a) The charging indicator flashes

b) The charging indicator is not flashing at fast speed = charging error

Charging indicator codes are a sequence of flashes that end with a longer pause and are repeated after the pause.

Sequence	State	Visual representation of the flash code
1 flash	Battery preheating	
2 flashes	Precharging= charging with limited current	
3 flashes	Main charging state with full power	
4 flashes	Balancing	
Long on, short interruption	Charging finished	
Continuous fast flashing	Charging error	

In the event of a charging error, please try the following before contacting your Paxster service partner:

- Try disconnecting and reconnecting the charging cable
- Check that the contacts are dry and clean, and that 230 V has been established
- Before calling for assistance, note down the last 4 digits of the VIN (see chapter 4.1.1) and the registration number

62 rear door open

If the rear door is open or not properly closed / locked, this symbol is illuminated.

Check the doors and the door lock to avoid losing cargo.

63 seat switch

The Paxster is equipped with a seat switch which detects whether or not someone is sitting on the seat. This safety feature is logically combined with different other safety functions and monitored by the motor controller to avoid unintended movement or dangerous situations.

Safety functions using the seat switch signal are, for example:

Startup order:

The seat switch must detect a person on the seat before the throttle is turned. If no person is detected and the throttle is turned, the Paxster will not start moving and show an error in the display. → this may occur if a third person outside the Paxster tries to move it by turning the throttle.

To delete the error code in the display and start the vehicle, switch off the ignition and turn it on again.

Lost driver braking:

If the seat switch does not detect a person on the seat while it is driving, the vehicle will gently slow down using the regenerative brake. After it has slowed down to about 6 km/h, the APBU (automatic park brake unit) will engage and block the rear axle to stop the vehicle and prevent further movement.

Info: a brief loss of driver weight on the seat (e.g., when driving over a bump) will not engage the brakes.

64 regenerating indicator

This indicator illuminates when regenerative braking is active.

INFORMATION

Use the regenerative brake = motor brake by adjusting the throttle to 0-5 % or 15-99 %. Slowing down the vehicle using the throttle charges the battery and avoids brake wear.

65 fault indicator

The fault indicator will illuminate in the event of any severe faults. A fault code will also appear in the multi-functional area (73) of the main instrument panel to indicate the fault source. Please write down the code or take a photo to make communication with a technician easier.

NOTICE

The Paxster motor controller is self-protected. In some fault cases the Paxster will slow down or stop. As long as it can continue to be driven (perhaps just with reduced speed) the vehicle can be driven to a workshop or depot.

If you are uncertain or the vehicle feels unsafe to drive, please contact your manager or local Paxster service partner for assistance and provide your location, the last 4 digits of the VIN (see chapter 4.1.1) and the fault code.

66 brake fluid

This indicator illuminates in the event of low brake fluid level. This is a severe fault indicator, the vehicle shall not be driven and assistance must be called.

WARNING

The brake fluid indicator shows a low brake fluid level. This might affect the braking capability of the Paxster for the brake handle and the brake pedal. The last remaining brakes are the APBU and regenerative braking.

Stop the vehicle and call assistance.

APBU and regenerative braking alone are not proper means of braking. Driving with the brake fluid indicator on may lead to accidents!

NOTICE

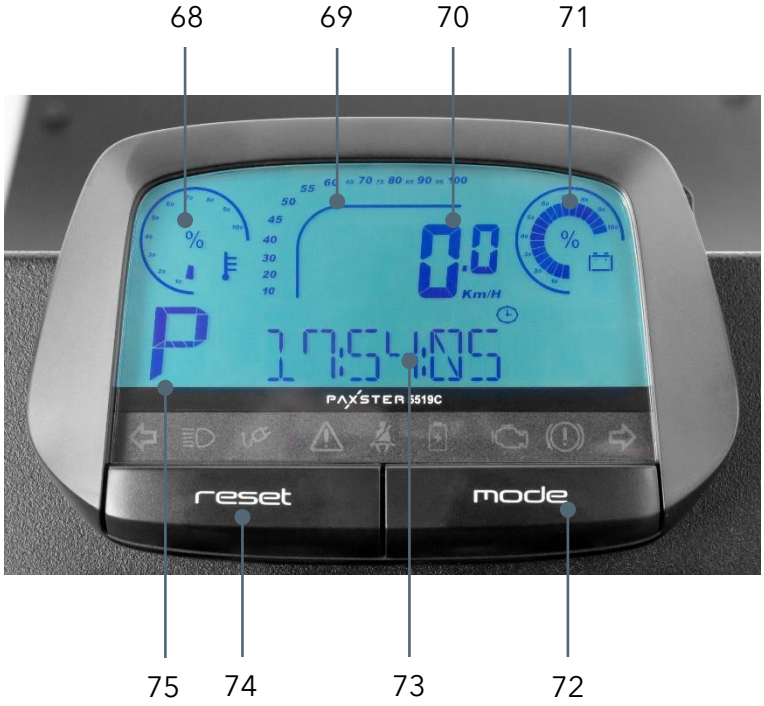
The Paxster Gen 2.2 has 2 separate brake fluid reservoirs:

One small one on the left-hand handle which only supplies the brake line from the handle to the s-block (brake line distribution device located behind the right front wheel).

One big one located behind the vertical cover below the seat, beneath the charging plug which supplies all brake lines to the wheels.

Tools are required to check and/or refill brake fluid.

Main instrument panel display areas:



Item	Description
68	Motor temp in % of max. temp
69	Eco meter
70	Speed
71	Battery discharge indicator
72	Mode button
73	Multi-functional area
74	Reset button
75	Drive mode indicator

68: Motor temperature

The motor temperature is shown in % of the maximum allowed temperature within the motor.

INFORMATION

Energy-efficient driving reduces the motor temperature and the wear of the components.

69: eco-meter

The eco-meter shows the energy consumption of the vehicle and the recuperation energy that is stored back into the battery.

INFORMATION

Using the regenerative brake = motor brake when the throttle position is 0-5 or 15-99 %. Slowing the vehicle down using the throttle charges the battery and avoids brake wear.

70: speed

The speed is optionally displayed in km/h or mph. To switch between the units, please refer to 72 / 74 further down for further information.

71: battery discharge indicator

This indicator shows the state of charge of the traction battery. After starting the vehicle, it may take a few seconds for the displayed value to be adjusted.

NOTICE ⚠

The charge status is calculated by a current sensor measuring current flowing into and out of the battery. The charge status is reset when a charging cycle is completed, including balancing. The Paxster vehicle must be charged whenever it is not in use. If it is not charged at least every second day, the charge status might fade and not show the correct charge status.

72 | 74 mode and reset button

Use the mode button (66) to browse the menu and the reset button to reset or choose a value.

The menu that you browse is displayed in the multi-functional area (67) of the instrument panel. The menu order is:

Clock – Trip – ODO – RunTime – TotalTime – MAX Speed – TempMotor – BAT (Volt) – TempController – BAT (Amps) – Throttle (Volts)

NOTICE ⚠

The Trip and the RunTime can be reset by holding “Reset” for 3 seconds

On new installations, you can also set the ODO reading (mileage) to the correct value which the vehicle had before the exchange was required. See chapter 7.2.14 for detailed adjustment information.

73: multi-functional area

This area can display different data, which can be browsed using the mode button (66).

The displayable information is:

Clock – Trip – ODO – RunTime – TotalTime – MAX Speed – TempMotor – BAT (Volt) – TempController – BAT (Amps) – Throttle (Volts)

In case of faults and the fault indicator (60) flashing, a fault code might be displayed in the multi-functional area of the main instrument panel. Please note the last 4 digits of this code. This information is crucial for service technicians for determining the root cause.

Please refer to chapter 8.4 for a fault code overview.

75 drive status

The drive status indicator shows the 3 relevant drive statuses of the vehicle:

P: park	APBU (automatic park brake unit) engaged at rear axle
D: drive	throttle signal and / or speed signal are present
N: neutral	coasting
B: brake	brake pressure has been applied, or the regenerative brake is active

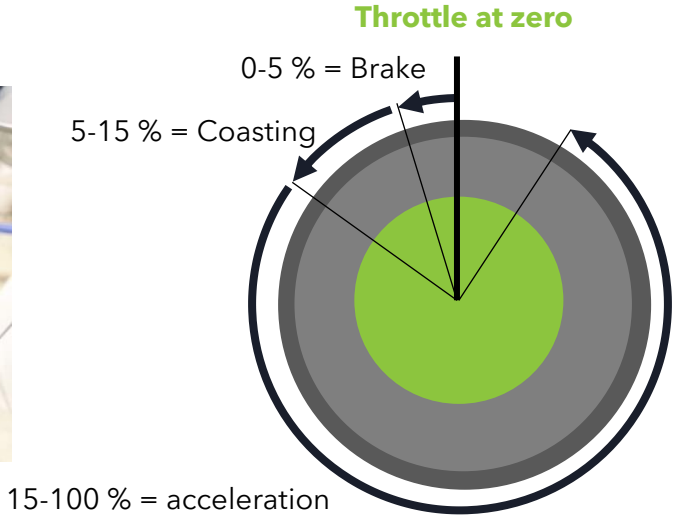
7.2.6 Throttle

The throttle (50) is integrated into the right handle grip. Turning it will activate the drive motor and accelerate the vehicle. Switch the vehicle on and sit down on the seat. A seat switch detects your presence. Prepare for driving, put on the seat belt, and adjust the mirrors.

Turn the upper part of the grip slowly towards you to start the vehicle.

NOTICE ⚠

To reverse, press the yellow reverse button on the left-hand control unit and use the throttle as you would when driving forwards.



Accelerating:

preparation: turn on ignition | sit on the seat | put on seat belt | adjust mirrors

Turn the throttle slowly towards you. between 0 and 15 % of the possible turning angle of the throttle, the vehicle will not start moving, but you will hear the automatic park brake unit (APBU) disengage.

Continue turning the throttle and the vehicle starts moving.

The greater the turning angle, the faster the acceleration. → and the more energy is required.

INFORMATION

Accelerate gently to conserve the battery and protect the environment. Gentle acceleration saves energy and reduces wear on the tyres and the drive train components.

Coasting:

If you turn back the throttle to 5-15 % the vehicle will freewheel.

Decelerating:

Release the throttle slightly to gently decrease speed. The more you release the throttle, the more the vehicle will brake regeneratively. Keeping the throttle between 0 % and 5 % will provide maximum regenerative braking which charges the traction battery.

INFORMATION

Deceleration / braking with the regenerative brake is the most energy efficient way of reducing the speed. The kinetic energy of the vehicle is used to charge its battery. This increases the range and prevents wear and tear of the usual brakes.

WARNING

The regenerative braking force depends on the drive mode you choose! Under normal conditions, eco mode is the correct mode to drive in. Regenerative braking is optimized in this mode.

In winter mode, regenerative braking is reduced to a minimum to prevent the rear axle from blocking and the wheels from sliding.

In High mode the regenerative braking is on maximum. This should only be used on dry roads with optimum grip. On wet roads or sandy tracks or if there are leaves on the road, using High mode may lead to blocking of the rear axle!

7.2.7 Brake pedal

The brake pedal operates the brakes on all 4 wheels. This is the main service brake device of the Paxster vehicle.

The service brake system is a 2-circuit system, where one circuit operates the front wheels, and the second one operates the rear brakes.

Operating the brake pedal will also activate the regenerative brake and charge the battery. The regenerative braking force depends on the drive mode that is chosen. → see chapter 7.2.11 for drive mode selector stages.

INFORMATION

Deceleration / braking with the regenerative brake is the most energy efficient way of reducing the speed.

NOTICE

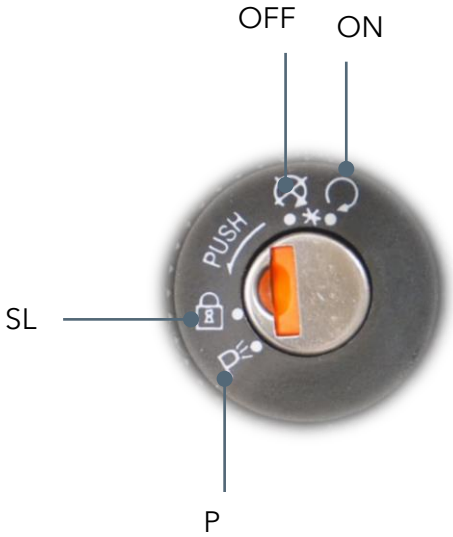
In the unlikely event of loss of brake fluid in one circuit, the second circuit will still provide braking power.

WARNING

Be aware that if one circuit fails, the brake pedal will feel extremely soft for quite a long way. Continue pressing it and the vehicle will brake!

7.2.8 Ignition lock and keys

The Paxster vehicle is activated and deactivated by inserting a key into the ignition lock. The ignition lock has different stages as shown below. The key can be extracted in position "0" and in the parking light position.



position	Description
P	Parking lights on, key can be extracted in this position
SL	The steering lock can be engaged in this key position, turn all the way to the left to engage the mechanical steering lock.
OFF	Vehicle off, key can be removed in this position
ON	Vehicle on

The Paxster is delivered with a set of 3 keys, which are unique to your vehicle. The key can be identified by the key code on the metal id plate. Note down this 4-digit code to order spare keys in case of loss.

7.2.9 Key fob

The optional key fob remote control system operates in parallel to the ignition lock, and can activate and deactivate the vehicle without a key being inserted into the ignition lock.

Item	Description
I	Indicator LED. On when key pressed and battery is okay. If not illuminated when key pressed: change battery
ON	Unlock the vehicle.
OFF	Lock the vehicle, big switch for easily locking the vehicle when leaving it.

NOTICE

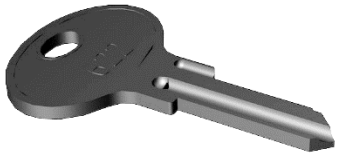
If an ignition key is set to the "on position" in the ignition lock, the remote control (key fob) cannot deactivate the vehicle. The vehicle remains active, and unintended use is possible when leaving the vehicle.

7.2.10 Other keys

The Paxster vehicle is delivered with 2 keys for the side compartments Pos 23 & 24. These are not unique, and will fit all vehicles. On new vehicles, these keys can be found in one of the side compartments. See chapter 7.8.3 for further information.

Paxster vehicles equipped with the rear cargo compartment type “delivery” will find another pair of keys delivered with the vehicles for locking and unlocking the rear doors manually.

These keys are unique. In the event of loss, the lock must be replaced. Usually, the locks of both the left-hand and the right-hand door can be operated with the same key.



7.2.11 Switchboard

The switchboard contains 4 switches for operating the drive mode, the heated windscreen and grips, the washer and the wiper.

Item	Description
76	Windscreen wiper switch
77	Windscreen washer switch
78	Defrost switch for windscreen and heated grips
79	Drive mode selector

76 wiper switch

The wiper switch has three positions

- INTERVAL ↑
- OFF →
- PERMANENT ↓

77 washer switch

The washer switch activates the windscreen washer pump, which is located directly on the water tank in the right-hand side compartment (23). After a long period of storage or if the tank was completely drained, it might take several seconds for water to reach the windscreen.

NOTICE

If no washing water reaches the windscreen, check the washing fluid level in the right-hand side compartment.

Fill the washer tank with anti-freeze detergent if the ambient temperature may reach freezing point.

INFORMATION

Use environmentally friendly washing agents / defrost agents to save the planet. Every effort counts.

78 defrost switch

The defrost switch has 3 stages:

- ACTIVATE WINDOW DE-ICER ↑ Turns off automatically after 15 minutes
- OFF →
- ACTIVATE HEATED GRIPS ↓ Turns off after 15 minutes ↓

After 15 minutes the chosen function deactivates automatically, but the switch retains its position. To reactivate the chosen function, set the switch to "OFF" and to your chosen option again to get another 15 minutes of heating.

NOTICE

It is not possible to heat the wind shield and the heated grips at the same time.

INFORMATION

Use the heated grips sparingly to save energy, but use them as often as it is required to make your workspace comfortable.

For windscreen heating: Safety first! Use the heater whenever it is indicated that defrosting or de-fogging is required.

79 drive mode selector

The drive mode selector has three positions = modes:

- High ↑
- Eco →
- Winter ↓

Select the mode in accordance with your requirement. Eco-mode is the recommended drive mode with the best energy efficiency

Drive mode	High	Eco	Winter
Low speed torque	High	Normal	Normal
Energy balance	Poor	Optimal	Poor
Regenerative braking force	High	Normal	Low

The drive modes affect the range of the vehicle. Choose eco mode whenever possible to obtain the maximum range.

NOTICE

High mode is only recommended when driving on steep inclines or starting on inclines and at a speed up to 6 km/h | 4 mph. At faster speeds, high mode consumes a lot of energy but has no advantage over eco mode.

You can switch modes while driving!

WARNING

On slippery ground (leaves on the road, icy or snowy conditions, wet road with pollen etc.) winter mode provides the highest level of safety.

In winter mode, regenerative braking is reduced to avoid blocking of the rear axle. The acceleration is also reduced. You will still get the same torque as in eco mode, but the ramp up to reach this torque is reduced, i.e. it takes longer to achieve the torque. This avoids spinning wheels.

Winter mode increases vehicle stability on slippery roads.

NOTICE

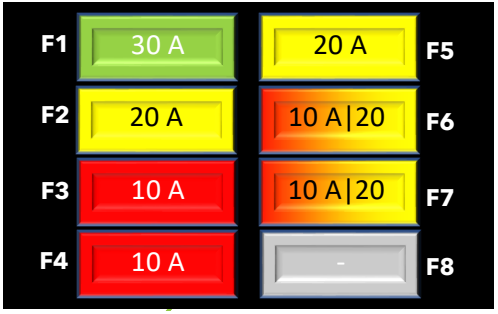
Use High mode on ramps and when driving onto trailers.

7.2.12 12 V fuses

The 7 most important 12 V fuses are located in a hatch on the right-hand side of the steering column. These fuses can be changed by the operator in the event of fuse failure.

Unscrew the star-lock screw manually and open the hatch to access the fuses.

Fuse	Size	Function
F1	30 A	Main fuse
F2	20 A	Wiper / washer
F3	10 A	Lights
F4	10 A	Ignition
F5	20 A	Defrost / heated grips
F6	10/20 A	Aux power via ignition
F7	10/20 A	Aux power permanent
F8	N/A	free



WARNING

Always replace defective fuses with fuses of the same type / size.

In standard vehicles, fuses F6 and F7 are 10 A and 12 V fuses. Special builds and vehicles with added 12 V consumers might have a 20 A fuse here instead.

CAUTION

If a replacement fuse fails immediately or after a few minutes, please contact your local Paxster service to find the root cause of the failure.

NOTICE

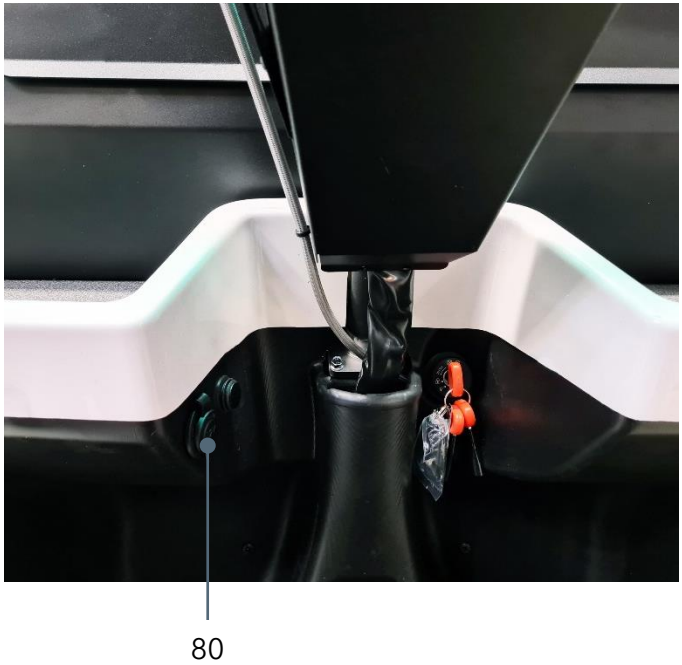
Technicians can find other fuses beneath the seat. These fuses must not be accessed or replaced by the operator or untrained staff.

7.2.13 12 V outlet

A 12 V outlet (80) can be found on the left of the steering column on the black plastic cover. The outlet is connected to fuse F7 on the steering column. The vehicles are supplied with a 10 A fuse. The maximum output of outlet depends on your vehicle configuration. If the output power is insufficient, fuse F7 can be increased to 20 A.

The outlet is designed to support telephones, tablets, and GPS systems.

The outlet is not designed for heaters!



Item	Description
80	12 V power outlet

7.2.14 Setting the time and units

To enter programming mode, press “mode” (74) and “reset” (72) simultaneously for about 3 seconds.

The order of adjustment is:

- 24/12 h
- Hours (time)
- Minutes (time)
- Speed unit (mph or km/h)
- During the initial setup of a new main instrument panel only, the odometer count can be set here

24 | 12 h

h | min

Km/h | mph

Browse the adjustments using the “mode” button (74).

Change a value by pressing the “reset” button (72).

Holding down the “reset” button will increase a value faster.

Exit programming mode by switching off the vehicle and switching it back on again.

7.3 Preparing the Paxster for operation

7.3.1 Checks and operations to be performed before daily use

Prior to starting a trip, the vehicle must be checked for damage and proper condition. It is particularly important to check all of the safety-related systems and devices.

WARNING

Risk of accident due to defects or damage to the vehicle or optional equipment.

If damage or extensive wear are detected on the vehicle, the Paxster needs to be taken out of service until it has been repaired.

- Report defects to your supervisor immediately
- Mark the defect vehicle and take it out of service

Test the warning devices

Test the horn by pressing the yellow horn button (58) on the left-hand control unit. The horn must react immediately and give a clear sound for as long as the switch is pressed. See chapter 7.2.3.

Test the main beam by moving the main beam switch (55) on the left-hand control unit forward. The blue main beam indicator must illuminate and the beam must be visible on a wall or obstacle in front of the Paxster. Also check for proper deactivation. See chapter 7.2.3.

Test the warning lights by activating the warning light switch (56) on the left-hand control unit, see chapter 7.2.3. Check that both front and both rear indicators are flashing.

Test safety-related devices

Check ignition switch and key fob for proper function (on/off)

- Switch on ignition using the ignition key
    - Check the display for indication of any problems
        - Fault indicator (65) indicates no fault
        - Brake fluid indicator (66) does not illuminate
        - Seat switch indicator (63) has detected driver = does not illuminate
        - The multi-functional area (73) is not showing any error code

Test the seat belt, see chapter 7.6

Test the steering, see chapter 7.11

Test the brakes, see chapter 7.12

Check the reverse switch (54) on the left-hand control unit for proper activation and deactivation

- Slowly (3-5 km/h) drive forward, leaving plenty of space in front of you and behind you
- Keep the throttle at this speed
- Activate the reverse switch → the vehicle must slow down and reverse
- Deactivate the reverse switch → the vehicle must slow down and start moving forward

General vehicle check

- Check the entire exterior of the vehicle for damage, especially sharp edges or cracks
- Check the vehicle / floor beneath the vehicle for leaks
- Check the wheels for damage:
    - Tyres have no visible cords or deep cuts
    - No objects in the tyres such as screws, nails or stones
    - No bulges visible on the tyres
    - Sufficient tread depth → see local regulations for summer and winter tyres
    - No cracks visible in the rims
    - All wheel bolts present and at the same depth in the rim (loose screws / nuts)
    - No rim deformation visible
- All lights are working and clean
- Windscreen wiper is not causing streaks, cleaning fluid is filled up
- Safety equipment is present and in proper condition

NOTICE ⚠

There might be local or company internal regulations for your safety equipment, which might also depend on the registration class of the Paxster (L6e or L7e). You must familiarise with these regulations.

7.3.2 Preparing the Paxster for operation

Before preparing the Paxster for operation, please read and carry out chapter 7.3.1.

Procedure for preparing the Paxster for operation:

- Disconnect the charging cable from the vehicle and store it safely, see chapter 6.4.
- Close the charging plug hatch
- Activate the vehicle by switching on the ignition by turning the ignition switch to "ON"-position, see chapter 7.2.8 or by using the key fob, see chapter 7.29

The vehicle is now operational.

7.4 Entry and exit

The Paxster intentionally has no doors for entering or exiting the vehicle in order to make the procedure of delivering goods easier.

You can enter and exit the Paxster almost upright.

You can enter and exit the Paxster at both sides.

NOTICE ⚠

Mind your head when entering and exiting the Paxster vehicle, the roof edges are bent downwards.

Watch out for the optional wind deflectors, since they are transparent.

Do not get hold of the wind deflectors when entering or exiting the vehicle. They are not designed to deal with force such as this.

Do not lean on the side compartments (23 + 24) when entering and exiting the Paxster.

WARNING

Before exiting the vehicle, pay attention to the traffic around the Paxster so that you exit safely.

If possible, exit the vehicle at the pavement side, not the roadside.

Park the Paxster safely before leaving it, see chapter 7.7

WARNING

Before exiting the vehicle make sure that it is at a standstill and the parking brake has been engaged.

- The display shows “P” when the parking brake is engaged

Particularly on slopes, Paxster recommends the following order for safe parking:

- Stop completely
- Release the brake pedal
- Make sure “P” is shown on the display
- Make yourself ready to exit the vehicle
- Pay attention to ongoing traffic and pedestrians
- Exit the vehicle

7.5 Adjusting the operator seat

7.5.1 Adjusting the seat

The seat can be horizontally adjusted in different positions by pulling up the seat adjustment bracket and pushing the seat forwards or backwards.

NOTICE ⚠

It is easiest to move the seat while you are sitting on it.

To choose the optimal sitting position, make sure that the seat is in a position where:

- Your right foot can operate the brake pedal
- Your knees are free from contact with the plastic parts to the left and right of the steering column
- You can steer to the furthest steering position in both directions with both hands safely on the steering bar.

NOTICE ⚠

Due to the presence of dirt or wear, the seat may get stuck and will only move if greater force is applied. Please ask your service provider to lubricate the guides and check for wear.

- Pull the seat adjustment bracket (81) upwards
- Pull the seat forwards or backwards
- Release the seat adjustment bracket
- Pull/push again on the seat to ensure that the bracket has engaged

Item	Description
71	Seat adjustment bracket

CAUTION

Crushing hazard.

Watch your hands and fingers when adjusting the backrest, particularly when pushing it backwards.

7.5.2 Seat switch function

The Paxster is equipped with a seat switch that detects a person sitting on the seat.

The Paxster will not allow driving to take place unless it detects a person (weight) on the seat.

NOTICE ⚠

For proper functioning of the seat switch the seat must be able to move vertically.

A certain amount of vertical free play must be present in order to engage / disengage the seat switch.

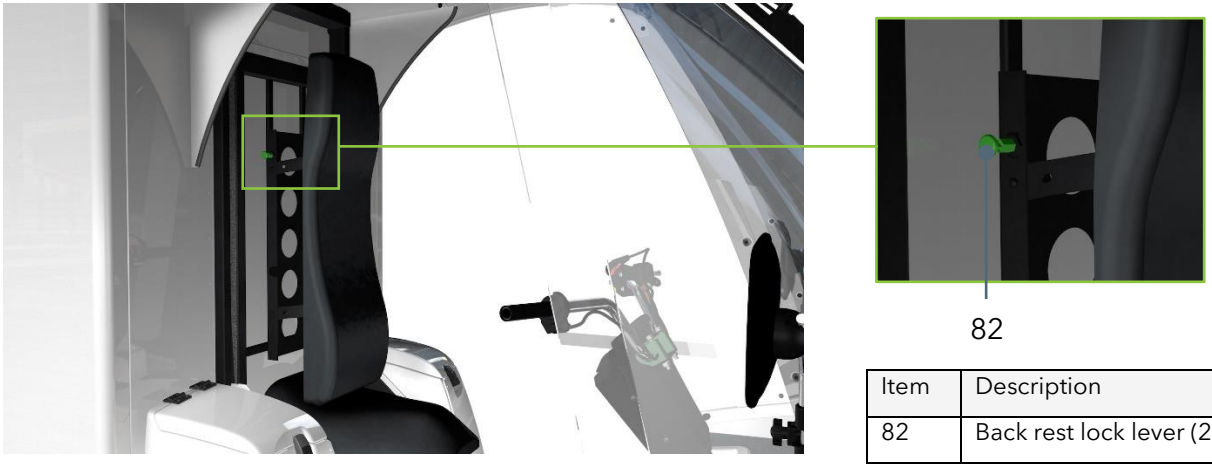
Make sure that no items are placed below the seat which compromise this function.

7.5.3 Adjusting the backrest

If the seat needs to be pulled forwards to give you a comfortable seating position, the backrest can be adjusted to certain positions.

To adjust the backrest:

- Pull out the lock levers at both sides of the backrest and turn them 90° to lock them
- Pull the backrest forwards
- Release both lock levers by turning them 90° and pushing them in
- Move the backrest further to a position in which the lock levers lock or the backrest is in the end position



Item	Description
82	Back rest lock lever (2 pcs)

CAUTION ⚠

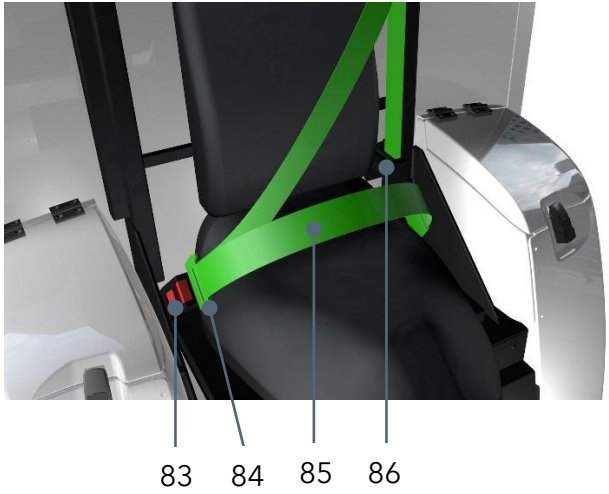
Crushing hazard.

Watch your hands and fingers when adjusting the backrest, particularly when pushing it backwards.

7.6 Seatbelt

The Paxster is equipped with a 3-point seatbelt to increase the safety of the driver. The use of the seatbelt is generally mandatory.

National or local exceptions may exist for delivery services. Please familiarise yourself with these regulations that apply to your use of the Paxster.



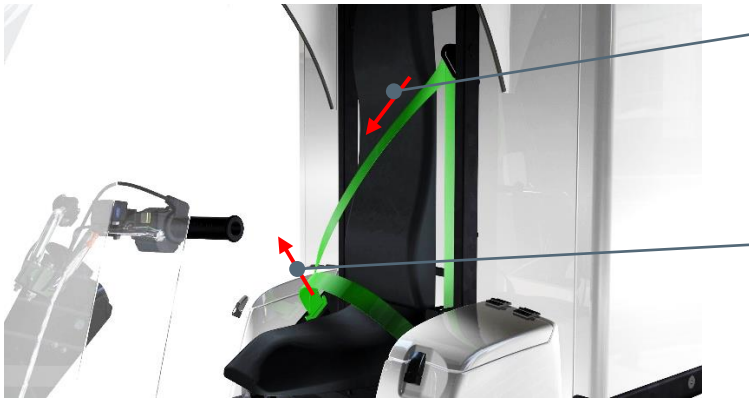
Item	Description
83	Seat belt buckle
84	Latch plate
85	Strap
86	Retractor

DANGER

Failure to use the seatbelt may lead to severe injuries in case of an accident!

Since it is a safety feature, the seat belt must be checked daily for proper function and wear.

- The edges of the strap shall not show wear / be frayed
- The latch plate must slide into the buckle easily
- The buckle locks and keeps the latch plate locked under load → lock it and pull on the latch plate
- The buckle must release the latch plate properly
- The retractor locks when you pull on the strap rapidly



Retractor test: pull rapidly and strongly,

→ retractor must engage / lock

Buckle test: pull rapidly and strongly,

→ buckle must retain the latch plate

WARNING ⚠

If any of the above-mentioned checks fail, please contact your supervisor and call Paxster for repair / assistance.

CAUTION ⚠

Do not power wash or spill water into the retractor.

Do not use any abrasive or corrosive cleaning agents for the seat belt components.

7.7 Parking the Paxster safely

The Paxster Gen. 2.2 is equipped with an automatic parking brake unit (APBU) to help you to park quickly in a safe way.

The goals of parking safely are:

- Prevent the vehicle from moving
- Prevent the vehicle from being driven / moved by third parties
- Unintended drive application by turning the throttle (when exiting the vehicle or by other persons)

WARNING ⚠

Not following this instruction for safe parking might lead to other persons (including children) being able to move the vehicle, damage to the vehicle and damage to vehicles / objects close to the Paxster as well as injuries to persons. Always think twice about where you want to park. Safety first!

Procedure for short term parking:

- Push the steering to the **right = pavement side** (if the brakes fail, the vehicle will roll toward the pavement)
- Switch off the ignition and take the keys with you
- If there is a key fob:
  - Do not insert the ignition key, but use the remote control
  - Press the big “OFF” button, see chapter 7.2.9

Procedure for long term parking:

- Push the steering to the **left = roadside**
- Switch off the ignition and push the ignition key further in and turn it to the “SL” position (steering lock), see chapter 7.2.8
- Move the steering bar slightly to the left and right to engage the mechanical steering lock
- Pull out the ignition key and take it with you

NOTICE ⚠

Both procedures can be combined with activating the parking light by moving the ignition key to the “P” position before removing the ignition key.

In the “P” position the warning lights can be activated without the ignition on.

7.8 Loading and unloading the Paxster

For loading the Paxster some general rules apply, as they do to all vehicles:

- Put heaviest load at the bottom
- Secure your load, particularly in the front cargo area (22) and the optional side cargo compartment (21)
- Do not overload the Paxster
- Distribute the load evenly between the right and left sides
- Counterbalance heavy weight in the rear cargo compartment (6) with weight in the front cargo area
- The weight / load affects the range of the vehicle
- The weight / load affects the braking distance
- The load distribution affects driving behaviour when cornering

WARNING

Failure to comply with the above-mentioned general rules may lead to unstable driving behaviour, longer braking distances and accidents.

Please think twice about your safety before driving.

INFORMATION

Do not carry loads / items that you do not require.

The less the Paxster weighs, the less energy it consumes… which saves money and protects the environment.

DANGER

How to recognize erroneous load distribution which may lead to unstable driving behaviour:

- Heavy load placed in the rear and no load in the front
- Operating the steering bar is extremely easy → **risk of front axle losing contact with the ground**
- Vehicle cannot be steered properly
- Storing heavy items on top → **leads to unstable cornering, and the vehicle may tip over**

WARNING ⚠

The following situations must be avoided. They lead to unstable and dangerous driving behaviour of the vehicle.

- Heavy load in the rear, no load in the front
- Front axle loses contact with the ground

- Heavy load in the front
- Increased steering force
- Rear wheels may lock when braking

- Too much heavy load on top in the rear
- Vehicle may tip over when cornering
- Vehicle instability when

7.8.1 Rear cargo compartment

The rear cargo compartment (6) is the main cargo area and is used to store items which are not immediately required. Items which must be used immediately are stored in the front cargo area (22).

Two different rear cargo compartments are available:

- Delivery type → 3 plastic hinges per door
- Cargo type → 2 metal hinges per door

The rear compartment (6) may be equipped with different shelf types, in accordance with the customer's requirements.

Technical data:

Dimension	Cargo compartment	
	Delivery	Cargo
Inner max length	620 mm	678 mm
Inner max width	972 mm	1115 mm
Inner max height	1115 mm	1135 mm
Clear door opening (w x h)	880 x 1017	960 x 1049
Usable volume	app. 670 litres	app. 858 litres
Max permitted load	190 kg	190 kg

7.8.1.1 Type "cargo"

The rear cargo compartment can be accessed by pressing the door lock opener 16 on the left-hand door. The right-hand door will then open.

- Press the round rubber switch for about one second to open the right rear cargo compartment door.
- Pull the right-hand door open until it reaches the door magnet (8) on the right-hand cargo compartment wall to keep it open safely

CAUTION ⚠

Always open the door completely to secure it with the door magnet (8) on the side wall. Otherwise, the wind could move the door and injure persons or damage property.

NOTICE ⚠

The rear door lock opener is only active if the ignition has been switched on using the ignition key or the key fob.

If the ignition is switched off, the rear door lock will not open the doors.

If the rear door open warning (62) on the main instrument panel is illuminated, the left rear door is not closed properly! See chapter 7.2.5.

Item	Description
6	Rear cargo compartment
14	3rd brake light
15	Rear view camera
16	Rear door opener and handle
8	Door magnet

CAUTION

Be careful opening a door in severe weather, since the wind might blow it open or closed. Freely swinging doors can lead to injuries and property damage.

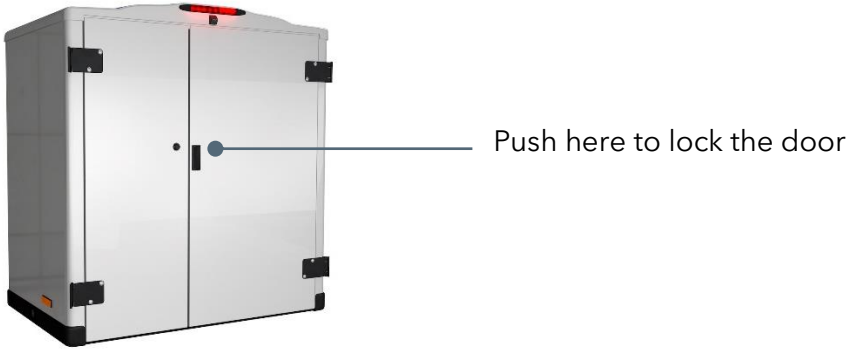
Always open the door all the way until it is secured by the door magnet.

To close the door pull it away from the door magnet and guide the door until it is shut.

NOTICE

To release the door from the magnet, always pull it at the lower edge of the door. Do not pull on the upper edge of the door, since this may lead to deformation of the door.

Guide the door until it reaches the closed position and press it into the door lock.



NOTICE

To lock the door push it in a location that is close to the door handle to avoid deformation of the door.

Before opening the left-hand door, the right-hand door must be opened.

To open the left-hand door, pull the left door lever (77) on the inside of the door towards the centre of the vehicle and pull the door open.

77

Item	Description
77	Left door lever

7.8.1.2 Type "delivery"

The delivery type rear cargo compartment is the smaller version, and has two mechanically lockable doors.

If your Paxster is equipped with the key fob system, this can also be used to electronically lock the cargo compartment doors. Nevertheless, each door can also be locked manually.

To open a delivery door:

- Turn the door key 90° anticlockwise if the door was manually locked
- Pull the plate of the handle towards you and pull the door open
- Open the door 180° to lock it open. A ball catch holds the door open.

The left-hand and right-hand doors can be opened and closed independently of each other.

NOTICE

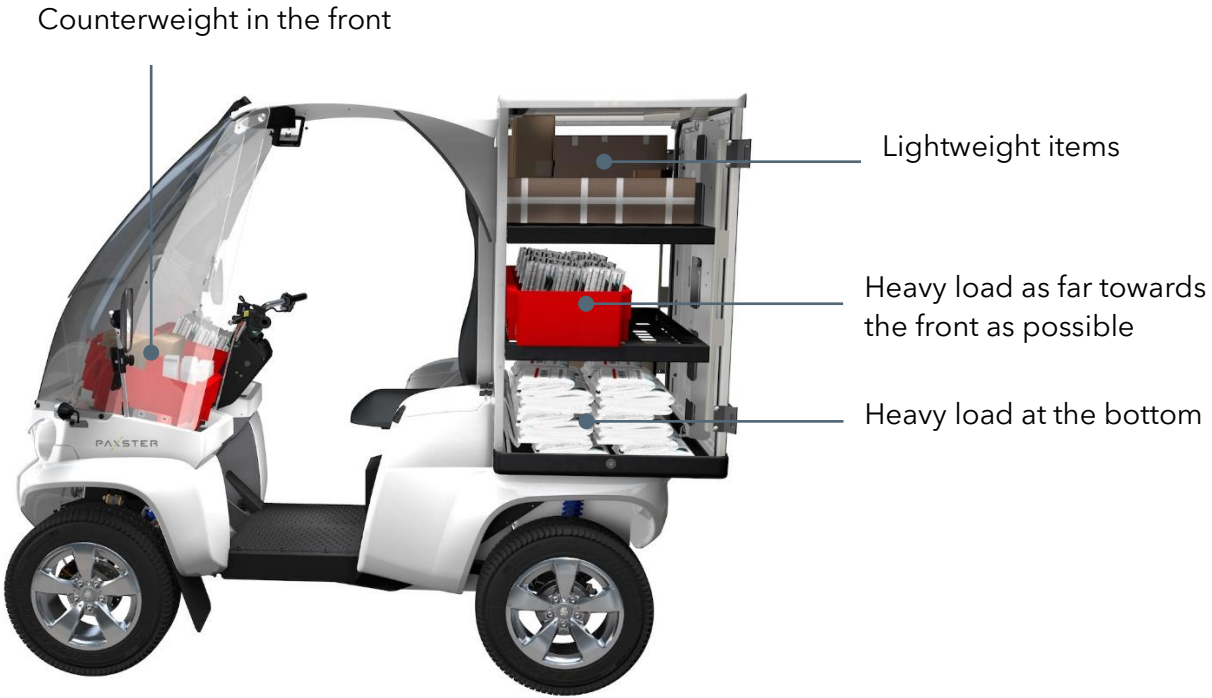
To lock the door push it in a location that is close to the door handle to avoid deformation of the door.

CAUTION

Always open the door all the way to secure it using the door catch at the corner post. Otherwise, the wind could move the door and injure persons or damage property.

7.8.1.3 Load distribution

For proper load distribution and increased vehicle stability, always place heavy items as low as possible and as far towards the front as possible, and place lightweight items on the upper shelves.



WARNING

Having the correct load distribution is essential for safe and stable driving.

The following rules apply with regard to the load distribution for safe driving:

- Pack heavy items as low as possible
- Position heavy items as far towards the front of the rear cargo compartment as possible
- Counterbalance heavy loads in the rear cargo compartment with loads in the front compartment
- More weight in the front equals more stable driving when cornering

WARNING

Never overload the vehicle! **Max 190 kg** in the rear cargo compartment, max. 50 kg in the front cargo area.

Keep a close eye on the centre of gravity.

7.8.2 Front cargo area

The front cargo area (22) is meant to be the primary cargo area for quick access. This area can be equipped with attachments for postal boxes, with a free area for parcels or other equipment, or it can be equipped with a front parcel box.

Special build Paxsters can also be equipped with customized support, e.g. for batteries, electric bikes or scooters.

Technical data:

Dimension	Front cargo area	
	Delivery	Cargo
Max amount letter containers	3	3
Usable floor space	0.59 m²	0.59 m²
Usable volume	150 – 250 litres	150 – 250 litres
Max permitted load	50 kg	50 kg

The front cargo area is usually equipped with three supports for letter containers / post boxes.

These are customized and differ between countries and customers.

NOTICE ⚠

If it is equipped with supports for letter containers, please ensure that the rubber strap is hooked onto the letter box to secure it during transport.

WARNING ⚠

Never overload the vehicle! Max 190 kg in the rear cargo compartment, max **50 kg** in the front cargo area.

Keep a close eye on the centre of gravity.

If your Paxster is equipped with a front parcel box, the parcel box hatch only opens if the ignition is switched on using the ignition key or the key fob.

To open the front parcel box, press the lock button for about 1sec. The hatch pops open and can then be lifted up vertically.

Pull the hatch open and push it to the front of the vehicle to secure it in open position.

Front parcel box, handle of open hatch

Front parcel box lock switch

To close the hatch, guide the hatch against the direction of travel and lower it until it reaches the lock latch. Press the hatch down firmly to engage the lock mechanism.

NOTICE ⚠

If it is not locked properly, the vehicle will activate a warning buzzer because the ignition is switched off.

If your Paxster is equipped with a canvas to protect the front letter boxes from the weather and from unauthorized access, make sure that the canvas is locked when leaving the vehicle.

NOTICE ⚠

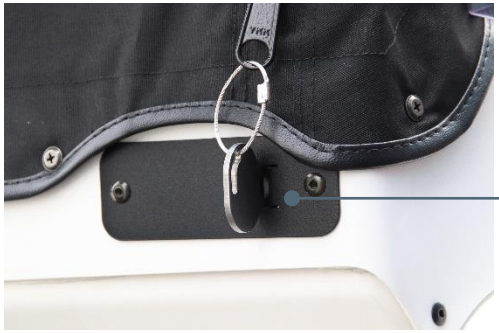
The zipper must be operated on its latch. Do not pull the canvas open by pulling the canvas itself. This will damage the zipper.

Lubricate the zipper with zipper lubricant if it becomes difficult to operate.

Vehicles equipped with canvas and key fob have a key on the zipper and a lock on the right-hand side for securing the canvas zipper. This lock is activated and deactivated by the key fob and by the ignition key.

The zipper key can be inserted into the lock at any time

The zipper key can be pulled out of the lock when the ignition is turned on using the key fob or the ignition key.



Canvas zipper lock with inserted zipper key

7.8.3 Side compartments

The side compartments provide additional storage space for tools and personal belongings.

NOTICE

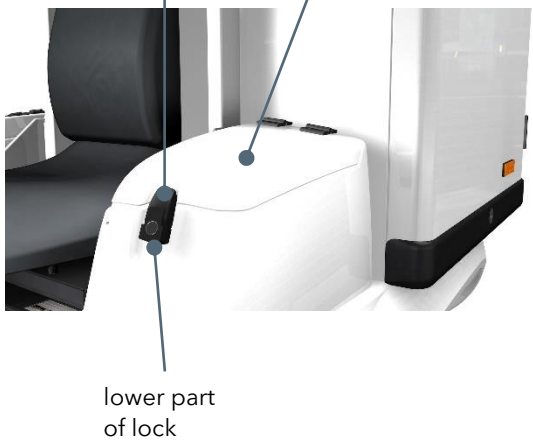
The side compartments (23 and 24) are not watertight or rain proof. Small quantities of water may penetrate these compartments.

Both side compartments can be locked using the same key.

These keys are not unique to one vehicle. One key can open the side compartments of any Paxster.

To open the compartment:

- If locked, insert the key and turn it 90° → see chapter 7.2.10
- Lift the lower end of the lock (which includes the key lock)
- Lift the upper part of the lock and pull it in direction of travel
- The lock is now released and the hatch can be opened



Right side compartment

This compartment (23) accommodates the washing water tank for the windscreen wiper and the diagnosis plug.

The resulting space can be used for lightweight personal belongings. The compartment can be locked with a key.

NOTICE ⚠

Only place lightweight components weighing up to 2 kg in total here. Water hoses, cables and other components stored in this compartment must not be damaged by sharp items or heavy items.

Please note that this compartment is not waterproof, only water repelling.

Left side compartment

This compartment (24) can be used to store personal belongings, tools, and safety gear weighing up to 10 kg.

The compartment can be locked with a key.

NOTICE ⚠

Only lightweight components must be placed here. Paxster recommends limiting the weight in this compartment to **10 kg.**

Please note that this compartment is not waterproof, only water repelling.

7.9 Travel

WARNING

Risk of collision when driving and operating the vehicle.

Do not start driving if the rear doors are not properly closed. Vehicles equipped with the cargo compartment type “cargo” will warn you when the rear doors are not properly locked by illuminating the warning light (62) on the main instrument panel.

Vehicles equipped with the cargo compartment type “delivery” do not have this feature.

WARNING

Risk of collision.

In the event of limited visibility towards the rear, use the rear view camera as an additional feature to ensure that no person or object is concealed behind the vehicle. If in doubt, stop the vehicle, go to the rear, and ensure that safe reversing is possible.

If still in doubt, ask a person for assistance.

CAUTION

Crushing hazard.

Do not leave the vehicle until it is completely stationary and the APBU is engaged.

7.10 Steering

The Paxster Gen 2.2 has a directly-operating steering bar (20). This does not require power steering. The steering bar is connected to the wheels via steering links.

NOTICE

If possible, roll forwards or backwards slightly when operating the steering bar. This reduces friction and makes steering significantly easier.

WARNING

Reduce speed before cornering. Take the corner at a speed that is appropriate for the corner.

Braking while cornering will reduce the stability of the vehicle.

The Paxster vehicle is not equipped with an ABS system. Avoid braking and cornering simultaneously. → see chapter 7.11 for further information

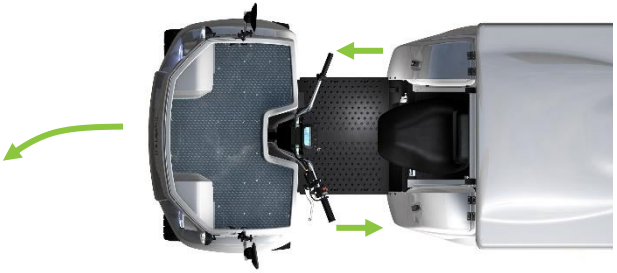
Start accelerating after cornering, when the vehicle has straightened up (steering bar in neutral position) to keep the vehicle stable.

INFORMATION

Smoothly reduce your speed, mainly using regenerative braking. This charges the battery and reduces the amount of fine dust cause by tyre wear.

Accelerate slowly to save energy. Spinning wheels create fine dust.

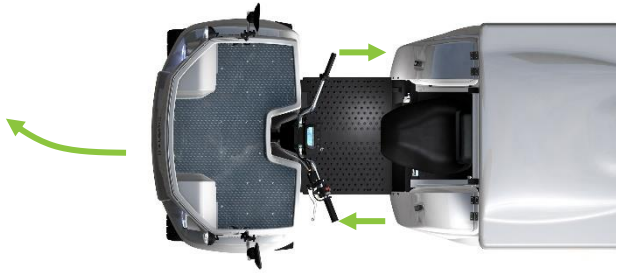
Cornering to the left



Keep both hands on the handles of the steering bar. If possible, use the throttle to move the vehicle by a few centimetres while steering.

Pull the left side of the steering bar towards you and push the right side of the steering bar away from you to perform a left-hand turn.

Turning to the right



Keep both hands on the handles of the steering bar. If possible, use the throttle to move the vehicle by a few centimetres while steering.

Pull the right side of the steering bar towards you and push the left side of the steering bar away from you to perform a right-hand turn.

WARNING ⚠

The vertical load distribution has significant impact on the stability of the vehicle when cornering! Keep heavy loads as low as possible in the vehicle to keep down the centre of gravity. See chapter 7.8.

WARNING

When you are cornering, lateral force is generated which needs to be transferred to the ground.

slower cornering speeds are required on road surfaces with reduced grip!

Cornering speed-reducing factors are

- Snow
- Leaves
- Wet road surface
- Oily road surface
- Dirt
- Gravel rather than asphalt / concrete

WARNING

Worn tyres or inappropriate tyres will reduce the maximum possible cornering speed.

7.11 Braking

The Paxster Generation 2.2 vehicle has 4 brake systems:

System	operates	Type
Brake pedal brake	All 4 wheels	Hydraulic
Brake handle brake	Front wheels	Hydraulic
Regenerative brake	Rear wheels	Electrical
APBU*	Rear wheels	Electromagnetic

*APBU: automatic park brake unit

NOTICE ⚠

The APBU is controlled by the motor controller and is automatically engaged if

- the speed is zero and no throttle is applied
- the speed is zero and no person is detected on the seat
- the speed is less than 5 km/h and no person is detected on the seat
- the speed is less than 5 km/h and a severe drive train fault is detected

NOTICE

Regenerative braking is applied automatically if

- the brake handle or pedal is just slightly operated
- the throttle is released beyond the idle range
- on downslopes if the vehicle speed exceeds maximum allowed speed
- switching from forward to reverse with the throttle applied
- switching from reverse to forward with the throttle applied
- the speed is above 5 km/h and a severe drive train fault is detected

7.11.1 Braking

INFORMATION

Use the regenerative brake system as often as possible to charge the battery and reduce the amount of wear and tear on the other brake systems.

Drive with anticipation! This is the safest way to drive and brake. Use the brakes as little as possible, let the vehicle coast, and brake regeneratively to reduce wear and increase the range by using the brake energy produced by the regenerative brake to recharge the battery of the vehicle.

Choose the brake that you use in accordance with the situation you are in.

If you need maximum braking force, use the service brake!

Think about your speed to avoid unnecessary braking.

WARNING

The Paxster vehicle is not equipped with ABS systems. Simultaneously braking and steering might lead to loss of friction and steering ability. If you need to steer, do not brake, or at least reduce the amount of braking force.

In emergency braking situations in corners, use interval braking = pump the brake pedal while steering.

WARNING ⚠

The braking distance depends on the actual weight of the vehicle.

More weight = longer braking distance

The braking distance depends on the amount of force that is applied to the brake pedal (or handle).

The more force that is applied, the shorter the braking distance will be.

The braking distance depends on the road conditions.

- Snow
- Leaves
- Wet road surface
- Oily road surface
- Dirt
- Gravel rather than asphalt / concrete

will increase the braking distance.

The condition of the

- Tyres
- brake pads / brake disc / drum brake

will affect the braking distance. Worn parts will increase the braking distance.

NOTICE ⚠

Use winter tyres in cold, wet, snowy weather. Use summer tyres in warm dry conditions.

Familiarise yourself with the local regulations regarding the use of tyres and the required profile depth.

7.11.2 Service brake

The service brake of the Paxster Gen 2.2 is operated using the brake pedal (51), and acts on all 4 wheels. The service brake is a 2-circuit brake system - one circuit operates the front axle, and the other one operates the rear axle. If one circuit fails, the other circuit is still available.

WARNING

If a brake circuit fails, the pedal will feel soft. The will need to be pressed much further down to apply brake force to the remaining circuit.

The brake distance will increase if one circuit is compromised.

INFORMATION

A brief press of the pedal activates the regenerative brake for supporting the service brake and reducing wear.

Use the regenerative brake system as often as possible to charge the battery and reduce the amount of wear and tear on the other brake systems.

The service brake must be used whenever regenerative braking does not create a sufficient amount of braking force.

The service brake is comparable to the brake pedal of normal passenger cars.

WARNING

Use the service brake in any emergency braking situations to obtain maximum braking force.

7.11.3 Brake handle

For Paxster users who are used to driving mopeds / quads (ATVs) / motor bikes or older generations of the Paxster vehicle, the Paxster Gen 2.2 provides a left-hand brake handle (46). This only operates on the front wheels.

This brake is connected to the service brake front circuit via a special separator unit called an S-block.

Since it only applies force to the front wheels, this brake system is less powerful than the service brake operated by the brake pedal.

WARNING

In any cases of emergency braking or a high braking force requirement, the **service brake** must be used.

INFORMATION

A brief press to the lever activates the regenerative brake for supporting the brake handle and reducing wear.

Use the regenerative brake system as often as possible to recharge the battery and reduce the amount of wear and tear on the other brake systems.

Technical information:

The brake handle has its own brake fluid reservoir. The brake fluid of this reservoir has no direct connection to the main brake reservoir. The brake fluid of the brake handle only oscillates in the hose between the brake handle and the S-block.

NOTICE

See chapter 7.2.4 for brake fluid reservoir and brake fluid check.

7.12 Tyres and rims

The tyres are your only connection to the road!

NOTICE

Only use tyres of the approved size, load index and speed index.

Type	Tyre designation	comment
Summer	145/70 R13	Use spacer Paxster art. no. 15015513 on rear axle if using aluminium rims
Winter without studs	145/70 R13	
Winter with studs	155/70 R13	Use spacer Paxster art. no. 15015513 on rear axle
Tyre pressure	1.8-2.0 bar	

For load index and speed index see chapter below.

NOTICE

All aluminium rims and tyres of size 155/70 R13 require spacers 15015513 on the rear axle. Failure to follow this instruction causes damage to the tyres.

Rims

Paxster Gen 2.2 steel rims are defined as:

- 4.5 JX
- 4 x 100 hole number and diameter
- 13 mm hole diameter
- ET30 wheel offset.

Paxster Gen 2.2 aluminium rims are defined as:

- 13x4.5 J
- 4 x 100 hole number and diameter
- 13 mm hole diameter
- ET30 wheel offset.

Tyres

Paxster Gen 2.2 **summer tyres** and **winter tyres** are defined as:

Dimension	L6e-BU	L7e-CU
Tyre size	145/70 R13 155/70 R 13	145/70 R13 155/70 R 13
Min. load index at front axle	36	42
Min. load index at rear axle	64	64
Minimum speed index	B	D

CAUTION

Check your tyres at regular intervals. Minimum profile depth varies from country to country.

Country	Summer tyre	Winter tyre
Norway	>1.6 mm	>3.0 mm
Germany	>1.6 mm	>1.6 mm and snowflake marking
Austria	>1.6 mm	>4 mm

NOTICE

All aluminium rims and tyres of size 155/70 R13 require spacers 15015513 on the rear axle. Failure to follow this instruction causes damage to the tyres.

Different tyre dimensions might be present on some special builds. Please contact if you require information about other approved tyre dimensions for special builds or non-standard vehicles.

7.13 Long term storage

If the Paxster vehicle is not going to be used on some days, it must be connected to the grid by the charging cable.

The Paxster will only charge if required, and will automatically stop and start different charging stages / methods to maintain optimum battery protection and optimize battery life. This is the most energy efficient method of keeping the Paxster off duty on some days.

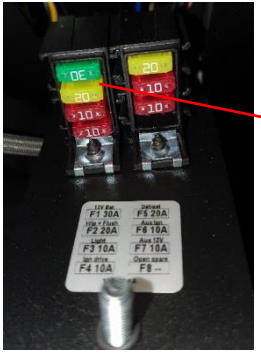
NOTICE ⚠

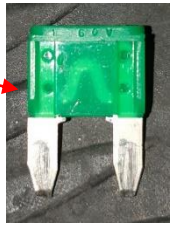
Particularly in cold conditions at temperature of less than +4°, the Paxster must be connected to the charger whenever it is not in use.

In cold conditions, the battery will be slightly heated because the vehicle is connected to the 230 V grid. This protects the battery from freezing and increases the service life of the battery.

If the Paxster vehicle is not going be used for more than 1 week without being connected to the 230 V grid, please perform the following steps:

- Charge the Paxster completely, including balancing, see chapter 7.2.5: charge indicator (62)
- Remove the main fuse F1 (see chapter 7.2.12) from the fuse holder (42). This will protect the battery from deep discharging





7.14 Range and battery consumption

The real-life range of a Paxster vehicle is shown in the table below.

Dimension	L6e-BU		L7e-CU	
	Delivery	Cargo	Delivery	Cargo
Small battery	40-60 km		35-50 km	
Medium battery	50-85 km		45-70 km	
Large battery	70-110 km		60-90 km	

The range is mainly affected by:

- Drive mode: eco mode is the optimal mode
- Regenerative braking: the more regeneration, the more recharging of the battery
- Load: less load equals more range
- Terrain: flat terrain equals more range
- Weather: snow reduces the range due to increased roll resistance
- Driving behaviour: smooth driving saves energy
- Consumers: electrical consumers such as windscreen heating reduce the range

Safety first: use these features if required!

8 Troubleshooting

This manual only describes the troubleshooting procedures that can be performed by the customer / driver. Other troubleshooting guides are applicable for Paxster technicians and Paxster partner workshops.

CAUTION ⚠

Only perform troubleshooting work that you are comfortable with! If in doubt, call roadside assistance or Paxster service.

Only troubleshoot the vehicle if the working conditions make safe working possible. Safety first. Do not work in unsafe conditions.

8.1 Paxster will not start

8.1.1 Charger not disconnected

To start driving, the charger needs to be disconnected from the vehicle.

- Switch off the ignition
- Remove the charging plug → see chapter 6.4.2
- Sit down on the seat
- Switch the ignition on
- Turn the throttle to accelerate

8.1.2 Throttle fault

Symptom:

The vehicle will not start, and shows error 0x4981 in the multi-functional area (73) of the display.

Solution:

Return throttle to neutral position (zero), switch ignition off and on again.

Cause:

The vehicle is equipped with a safety function which deactivates the motor if the throttle is not in the 0 position when the ignition is activated. This is to ensure that the vehicle does not accelerate unintentionally. The same function occurs if you twist the throttle immediately after turning on the ignition.

Correct procedure:

- Sit down on the seat
- Make sure the throttle is in neutral position
- Switch on the ignition (by key or key fob), wait for 2 seconds for the vehicle to start up.
- Operate the throttle to accelerate

8.1.3 Seat fault

Symptom:

The vehicle will not start, and shows error 0x4881 in the multi-functional area (73) of the display.

Solution:

Switch the ignition off and on again to reset the error. Make sure you are sitting on the seat and that no obstacle is preventing the seat switch from activating (the seat must be able to move downwards to activate the seat switch)

Cause:

The vehicle is equipped with a safety function which deactivates the motor if the seat is empty. This to prevent the vehicle from being operated without a driver on the seat. This is to prevent the vehicle from accelerating unintentionally.

8.1.4 No reaction whatsoever from the vehicle

Symptom:

The vehicle does not start up, and the display remains dark. No driving is possible.

Solution:

- Make sure you are using the correct key / key fob transmitter. Only the correct key / transmitter will start the vehicle
- Press the jump start switch and keep it pressed→ see chapter 6.5.1
    - Switch on the ignition
    - If the display lights up, keep the jump start switch (10) pressed for about 30 seconds
    - The display should now light up
- Charge the vehicle immediately and completely including balancing → see chapter 7.2.5 for charge indicator

Cause:

More often than not the main traction battery is empty, the DCDC converter is switched off automatically by the battery management system to avoid damage to the traction battery and the 12 V battery ran out of power.

Charge the vehicle whenever you are not driving it.

8.2 Paxster does not charge

8.2.1 Charge indicator flashing

Symptom:

The vehicle does not charge, the charge indicator (61) is flashing rapidly. See chapter 7.2.5.

Solution:

- Disconnect the charging cable and reconnect it
- If the error is still present, call a Paxster technician

Cause:

A communication error between the charger and the BMS might have occurred, the 230 V grid was unstable due to lightning in the area or due to a voltage drop in the grid, or the charger fuse may have blown.

8.2.2 Charge indicator not flashing

Symptom:

The vehicle does not charge, charge indicator (61) is not flashing. See chapter 7.2.5.

Solution:

- Disconnect the charging cable and reconnect it
- Check whether the 230 V outlet of the building has power
- If the error is still present, call a Paxster technician

Cause:

230 V is not detected, and the charger cannot provide current. The cause might be within the charger, the charging cable or the main grid (230 VC) of the building.

8.3 Paxster slows down and / or stops

8.3.1 Slowing down: power issues

Symptom:

The fault indicator (65) on the main instrument panel comes on and goes off after a short time. The performance of the vehicle is reduced. In the event of serious overheating, the vehicle may come to a sudden halt. A fault code appears on the display.

Solution:

- Turn the ignition off and wait for 5 minutes so that the vehicle can cool down.

Cause:

- The vehicle is exposed to heavy loads, e.g., fully loaded cargo zones on hilly terrain.
- Demanding starts on hills with a heavy load.
- One or more wheels have low tyre pressure.
- Brake is not releasing properly
- Other motor malfunctions
-

If the malfunction does not stop, contact your Paxster partner for further diagnosis and repair.

8.3.2 Slowing down: battery low

Symptom:

The fault indicator (65) on the main instrument panel comes on. The performance of the vehicle is reduced. A fault code appears on the display. The vehicle stops or will only reverse.

NOTICE

The main instrument panel may not indicate an empty battery. This happens if the vehicle is subject to an improper charging routine or charging errors.

Solution:

- Turn the ignition off and wait for 1 minute. Start up again
- If the error occurs again and you are not in close vicinity to a charging plug, the vehicles need to be rescued, see chapter 8.9.

Cause:

The vehicle runs out of battery capacity. The final warning to the driver is that the Paxster will only reverse to be driven out of the traffic and parked on a safe pavement location or parking lot.

Root causes:

- The vehicle had not been charged before driving commenced.
- The vehicle had more work to do than normal and consumed more energy
- Other charger malfunctions (e.g. defective charger cable).
- Check that the charger is plugged into 230 V AC.
- Tip: always check that the charger starts normally after stopping driving. The charge indicator must flash (1), 2, 3 or 4 times, see chapter 7.2.5
- Tip: Ensure that the charging cycle has been completed before driving.

8.4 Error messages on the display

The Paxster internal diagnosis system in capable of differentiating between about 200 different errors relating to the drive train, including the motor controller. The BMS can also send error messages, or it leads to certain error messages.

Only a few error messages are known to occur. These are listed below to help you to identify the problem.

NOTICE ⚠

Please write down the error code or take a photo of it as it appears on the display to help your local Paxster specialist to find the root cause and assist you.

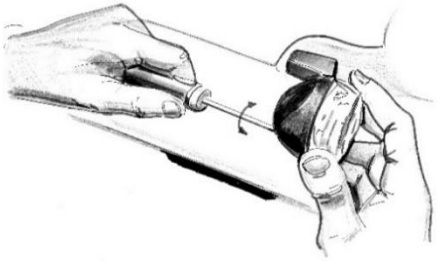
Only take photos if it is safe to do so and the Paxster is parked.

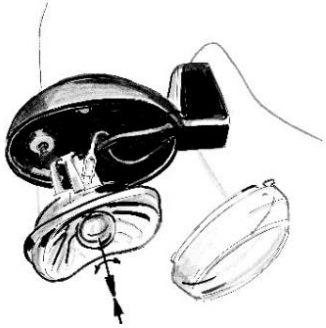
Code	Fault	Description and possible solution
0x45C3	Low battery	Traction battery empty, charge the vehicle immediately
0x45C9	Motor in low voltage cutback	Traction battery empty, charge the vehicle immediately
0x4602	Device too hot	Motor controller hot. Allow vehicle to cool down
0x4603	Motor too hot	Motor high temp. Allow vehicle to cool down
0x46C3	Fault ride through	Temporary. Could result in stop. Ignition off/on.
0x4881	Seat fault	Activate seat switch by sitting down before operating the throttle.
0x4882	Two-direction fault	Low 12 V battery. Try jump start switch.
0x4981	Throttle fault	Throttle not at 0 % when ignition turned on.
0x52C1	Encoder fault	Ignition off/on. Alt. call for service.

8.5 Changing a direction indicator bulb

The front direction indicators are powered by a common 12 V orange coloured indicator bulb which can be exchanged by non-professionals.

- Unscrew the small screw at the rear edge of the indicator housing.
- Remove the lens.
- To remove the old light bulb: Press the bulb in and turn about 45° to the left.
- Remove the old bulb.
- Reverse the process to replace the light bulb.





8.6 Changing headlight bulbs

On vehicles with halogen headlights, the bulbs can be replaced by non-professionals.

NOTICE

Only use 12 V / 35 W HS1 type bulbs. Other bulbs will cause damage to the vehicle.

- Turn the handlebars for easier access to the underside of the front fender.
- Disconnect the electrical plug of the headlight by pulling it against the direction of travel
- Pull back the rubber collar covering the rear of the light bulb.
- Tilt the clip to the side.
- Pull the light bulb out.
- Proceed in reverse order to install the light bulb.

NOTICE

Ensure that the rubber collar is properly seated to prevent dirt and water from penetrating and damaging the headlight.

8.7 LED headlight or tail light not working

LED headlights, tail lights, 3rd brake lights and registration plate illumination have no exchangeable parts. In case of damage, these components need to be replaced completely.

If no physical damage can be found, check the electrical plug and wiring before changing the light itself.

Only professionals may exchange LED lights.

8.8 Cleaning and changing the window wiper blade

Wiper blades are subject to wear and must be replaced at regular intervals, no later than when cleaning them does not prevent streaks on the windscreen.

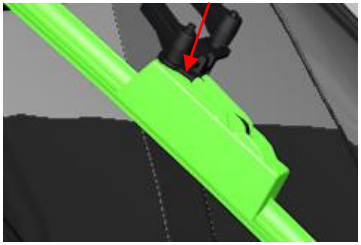
To clean the wiper blade:

- Use a damp microfibre cloth or standard cloth
- Pull the wiper from the wind shield and hold it to prevent it from springing back onto the wind shield
- Wipe the cloth along the wiper blade edge to clean off any residue
- Repeat this several times until the blade no longer leaves black marks on the cloth
- Slowly guide the wiper blade back onto the windscreen

To replace a wiper blade:

- Pull the wiper arm and blade from the wind shield

- Some blades have a release lever: press down the release lever (see red arrow indicating the lever position



- Pull the wiper blade out of the arm attachment (backwards and upwards)

- Hold the wiper arm tightly so that it cannot spring back onto the wind shield
- Insert the new blade
- Slowly guide the wiper back onto the wind shield

8.9 Recovering the Paxster

NOTICE

Towing a Paxster is only allowed for a few metres at the slowest possible speed.

Towing a Paxster creates electricity within the vehicle and can damage the motor controller and battery system.

Pulling the Paxster onto a rescue vehicle is allowed.

The Paxster Gen. 2.2 vehicle has an automatic parking brake unit (APBU) which locks the rear axle in the following rescue-related cases:

- Empty traction battery
- Empty 12 V battery
- No operator on the seat and no throttle signal
- Ignition off

To release the APBU, lift the emergency brake release lever.

8.9.1 Preparations for releasing the APBU

WARNING

Risk of unintended movement.

Releasing the emergency brake release lever disengages the parking brake. The Paxster can now move freely. Make sure that the vehicle is properly secured before releasing the APBU.

- Make sure that the brakes are working by depressing the brake pedal. There must be noticeable resistance, , and the pedal must not sink in.
- If the brakes are working, one person must sit down on the seat and operate the brake pedal and steer while towing / pushing
- If the brakes are not working properly, the vehicle must be secured with wheel chocks

8.9.2 Releasing the APBU

To release the APBU:

- Cut the 3.6x150 mm cable tie (87) which secures the APBU emergency release handle
- Lift the APBU release handle (88) firmly
- The APBU is now released

87 88

WARNING

Do not forget to lower the APBU release lever (88) after towing and secure it with a new of 3.6 x 150 mm cable tie (87).

NOTICE

Risk of overvoltage within the Paxster

Towing the Paxster generates voltage within the drive motor. This can damage the motor controller, battery management system and the battery of the vehicle.

To remove the Paxster from a road to reduce risk to the vehicle and third parties (ongoing traffic) the Paxster can be towed or manually pushed at very slow speed, max 10 km/h.

To reduce the risk of electrical damage, switch on the ignition before towing.

8.9.3 Manual pushing

Manual pushing is recommended to be carried out by at least two persons. One person sits inside the vehicle and operates the brakes if required and steers. A second person (or more) pushes the vehicle at the rear corner posts of the cargo compartments.

Ensure that the persons pushing remain at the side the vehicle, not behind the vehicle.

WARNING ⚠

Do not manually push the Paxster on slopes because of its weight.

Always ensure that one person operates the brakes.

8.9.4 Towing out of dangerous areas using a vehicle

WARNING

Danger of collision

Only tow using a vehicle if the brake system of the Paxster (brake pedal or hand lever) is not affected and is working properly.

Attach the Paxster to the towing vehicle using a strap or tow bar fitted to one of the lower front axle suspension arms.

Please note that this kind of towing is restricted to removing the vehicle from exposed / dangerous areas and should be limited to no more than 100 m.

8.9.5 Vehicle-operated towing over longer distances (>500 m)

Use a flatbed tow truck to transport the Paxster.

Secure the Paxster on the platform like any vehicle by clamping / strapping the wheels to the platform.

9 Optional equipment

Paxster provides a variety of original accessories to ease your working day and make your work safer. All of the equipment can be added to any existing vehicle unless otherwise specified in the relevant chapter.

Some options require vehicle-specific cables or attachments. We will therefore not list the item numbers here.

Please ask your local dealer for a quote for the options shown in the following.

9.1 Cargo compartment LED light

Cargo compartments of the “delivery” and “cargo” types can be equipped with an LED strip light to illuminate the interior of the compartment.

The light is activated by opening the rear doors.

The picture on the right shows a “delivery” type. In “cargo” type cargo compartments the strip light is situated behind the right rear corner post.

9.2 Cabin light

A LED spotlight can be mounted to the roof of the cab to illuminate the front cargo area.

The switch is located to the left of the windscreen wiper motor housing.

9.3 Cab side working lights

LED working spotlights are available for the left side and right side of the vehicle's cab. They are attached to the wind deflector / windscreen frame.

This working light illuminates the front right / left side, which is a preferred option for postal distribution.

The light is adjustable in all directions.

9.4 Cargo box side working light

This LED strip fitted to the side wall of the cargo compartment illuminates the right side of the vehicle and the pavement.

This working light may only be used when the vehicle is stationary.

9.5 Front parcel box

Instead of the standard post box holders a front parcel box can be installed. This is lockable and can be connected to the key fob system. A warning buzzer reminds you that the box is not locked when leaving the vehicle / switching it off.

The front parcel box is illuminated by a LED light, which is activated by opening the box.

9.6 Canvas front

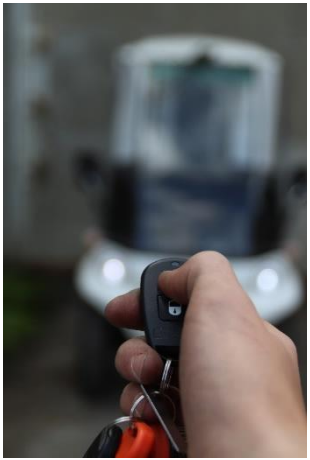
The front cargo area can be protected from the weather and unintended access using a canvas cover with a zipper.

This option cannot be combined with the front parcel box.

As an alternative to a manual lock system, the canvas zipper can be attached to an electronic lock, controlled by the key fob system.

In this case the canvas is locked and unlocked at the same time as locking or unlocking the vehicle / ignition.

9.7 Key fob



The key fob system is one of our best-selling options, and provides you with a convenient solution for switching the ignition on and off without using a key and without a key being inserted into the ignition lock.

A big switch on the remote control switches the ignition off and locks the rear doors. The canvas lock will also be activated if this feature is installed.

A smaller switch switches on the ignition, unlocks the rear doors and if installed, also the canvas lock.

The transponders are only programmed for one vehicle, meaning that the system will only lock and unlock one vehicle, even if multiple Paxsters are in one location and within range of the transmitter.

9.8 Wind deflectors

Wind deflectors are designed to guide wind and rain / snow away from the driver.

Transparent deflectors attached to the wind screen are particularly useful in windy and snowy conditions when the wind hits the front of the vehicle.

Smaller triangular deflectors between the roof and the cargo compartment protect the driver's head from lateral wind and rain / snow.

If you order the wind deflector option, all of the deflectors will be delivered in one set.

9.9 Rear view camera

The rear view camera system consists of an HD wide angle camera and colour screen, mounted on the roof of the cabin.

The screen and camera are automatically activated by the vehicle's reverse signal.

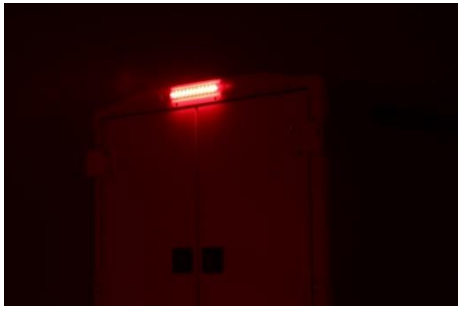
The system is designed for “cargo” type cargo compartments and can only be fitted to “delivery” type compartments if no third brake light is installed.

For “cargo” type cargo compartments the rear view camera and third brake light options can be combined.

This option is recommended when driving in crowded areas such as inner cities and pedestrian areas or if the Paxster needs to reverse in narrow industrial areas, particularly indoors.

9.10 3rd brake light

A third brake light can be fitted to “cargo” type cargo compartments in combination with all other available options.



This option cannot be combined with the rear-view camera in “delivery” type cargo compartments.

A third brake light increases the visibility and safety of the vehicle when braking.

9.11 PaxCon

Our fleet management solution PaxsterConnect or PaxCon is designed around the specific, unique needs of drivers and fleet owners in the last mile industry, and continuously refined and developed in strategic partnerships with our customers. The solution is truly unique because of its in-depth integration with vehicle systems, which allows us to create innovative, new features which are not found in competing systems.

Paxster Connect will provide optimal support to drivers and managers in Operations, and thanks to its in-depth integration, driver apps, sensors and an open API, it make innovation possible by using any data in proprietary systems.

Please visit our website for up to date information and an app download: https://paxster.no/paxster-connect/

9.12 Third-party equipment

A great deal of third-party equipment is available which can be installed in and on a Paxster vehicle.

WARNING

All electronic equipment installed in a Paxster or attached to it might interfere with Paxster vehicle systems.

This applies to all equipment which is not approved by Paxster.

Third party equipment installed in a Paxster must be approved for vehicle use.

The vehicle provides an interface beneath the seat for connecting 12 V consumers to the vehicle's battery and the reverse signal. Please contact your Paxster service provider for more information about this interface.

WARNING

The installation of any equipment which has not been approved by Paxster is carried out at your own risk. This particularly applies to equipment that emits radio frequencies such as GPS trackers, third party fleet management systems and warehouse management systems with a communication interface.

The installation of equipment that is not approved for vehicle use is prohibited.

10 Maintenance

10.1 Spare parts

To ensure safe and reliable operation, always use the manufacturer's original spare parts.
The manufacturer’s original spare parts are consistent with the manufacturer’s specifications and guarantee the highest possible quality with regard to safety, dimensional accuracy and material.
The installation or use of non-original spare parts can negatively affect the specified properties of the product and impair safety. The manufacturer cannot be held liable for damage caused by the use of non-original spare parts.

The product-related electronic spare parts catalogue can be found on our homepage, accessible for Paxster partner workshops after logging in.

NOTICE ⚠

Only original spare parts are subject to the manufacturer's quality control. To ensure safe and reliable operation, always use original spare parts provided by Paxster or Paxster certified partners.

10.2 Maintenance safety regulations and environment

10.2.1 Maintenance regulations

Paxster has a customer service department that is specially trained for these tasks. A maintenance contract with the manufacturer will ensure problem-free operation.
Vehicle maintenance, repair work and part replacement must only be carried out by specialist personnel.
Paxster has its own service network of mobile specialists in some countries.
Paxster also qualifies and certifies Paxster partners, workshops which are trained for troubleshooting, maintenance and repairing Paxster vehicles. These Paxster partners have direct access to diagnosis tools, original spare parts, and special tools.

NOTICE

As well as the requirements set up by Paxster for qualifying Paxster partner workshops, different countries have different requirements for working on electric vehicles, especially vehicles with high voltage components.

Only staff trained and certified by Paxster and who fulfil the local general requirements for working on high voltage electric vehicles are allowed to carry out work on a Paxster.

10.2.2 Working on the electrical system

WARNING

Electrical current can cause accidents
Ensure that the electrical system is de-energized before starting work. The capacitors in the controller must be completely discharged. The capacitors are fully discharged approx. 10 minutes after the electrical system is disconnected from the battery.
Before starting maintenance on the electrical system:

- Only suitably trained electricians may work on the truck's electrical system.
- Before working on the electrical system, take all of the precautionary measures for avoiding electric shocks.
- Park the vehicle securely (see chapter 7.7).
- Switch off the ignition and safeguard it from unintentional activation.
- Disconnect the battery (only by trained staff!)
- Remove any rings, metal wristbands etc.

10.3 Consumables and used parts

CAUTION ⚠

Consumables and used parts are an environmental hazard
Used parts and consumables must be disposed in accordance with the applicable environmental protection regulations. Oil changes should be carried out by the Paxster or Paxster partner workshops, whose staff are specially trained for this task.

Think about the local safety and environmental regulations for working with

- lubricants
- oil
- sealants
- adhesive
- cleaner
- brake fluid
- and other hazardous materials.

Think about the local safety and environmental regulations for working with hazardous components such as

- the 12 V AGM / lead battery
- brake components containing brake fluid
- the cells of the traction battery (LiFePo4)
- electronic components

10.4 Wheels

WARNING

The use of wheels that do not comply with the manufacturer's specifications can result in accidents

The quality of the wheels affects the stability and performance of the vehicle.
Uneven wear reduces the stability of the vehicle and increases the stopping distance.

- After replacing wheels, make sure that the vehicle is not skewed.
  - If the vehicle is skewed, check the wheel dimensions, since they may differ
- Always replace wheels in pairs, e.g., left and right at the same time.

Please refer to chapters 10.8, 10.9 and 10.7.6 for further information

Please familiarise yourself with the local regulations for the disposal of tyres.

10.5 Lubricants and lubrication schedule

Consumables must be handled correctly and in accordance with the manufacturer's instructions.

WARNING

Improper handling is hazardous to health, life and the environment

Consumables can be flammable.

- Keep consumables away from hot components and open flames.
- Always keep consumables in the prescribed marked containers.
- Always keep consumables in clean containers.
- Do not mix up different grades of consumable. The only exception to this are cases where mixing is expressly stipulated in the operating instructions.

CAUTION

Spilled consumables can cause slipping and endanger the environment

Risk of slipping from spilled consumables. The risk is greater when combined with water.

- Do not spill consumables.
- Spilled consumables must be removed immediately with an appropriate binding agent.
- The binding agent / consumable mixture must be disposed in accordance with the local regulations.

WARNING

Improper handling of oils can be hazardous

The Paxster gearbox is filled with gearbox oil. Oils are flammable and poisonous.

- Dispose of used oils in accordance with the regulations. Store used oil safely until it can be disposed of in accordance with the regulations.
- Do not spill oil.
- Spilled oils must be removed immediately with an appropriate binding agent.
- The mixture consisting of the binding agent and oil must be disposed in accordance with the local regulations.
- Observe the national and local regulations when handling oils.
- Wear safety gloves when handling oils.
- Prevent oil from coming into contact with hot parts.
- Do not smoke when handling oil.
- Avoid contact and ingestion. If you swallow oil, do not induce vomiting but seek medical assistance immediately.
- Go into the fresh air after breathing in oil fumes or vapours.
- If oil has come into contact with your skin, rinse your skin with water.
- If oil has come into contact with your eyes, rinse them with water and seek medical assistance immediately.
- Replace oil-soaked clothing and shoes immediately.

WARNING

Improper handling of brake fluid can be hazardous

The Paxster uses DOT 4 brake fluid. Brake fluid is poisonous.

- Dispose of used oils in accordance with the regulations. Store used brake fluid safely until it can be disposed of in accordance with the regulations.
- Do not spill brake fluid.
- Spilled brake fluid must be removed immediately with an appropriate binding agent.
- The mixture consisting of the binding agent and brake fluid must be disposed in accordance with the local regulations.
- Observe the national and local regulations when handling brake fluid.
- Wear safety gloves and goggles when handling brake fluid.
- Prevent oil from coming into contact with hot parts.
- Do not smoke when handling brake fluid.
- Avoid contact and ingestion. If you swallow brake fluid do not induce vomiting, but seek medical assistance immediately. Drink plenty of water and rinse your mouth with water.
- Go into the fresh air after breathing in fumes or vapours. Seek medical assistance, oxygen may be required.
- If brake fluid has come into contact with your skin, rinse your skin with water.
- If brake fluid has come into contact with your eyes, rinse them with water for at least 15 minutes and seek medical assistance immediately.
- Replace brake fluid-soaked clothing and shoes immediately.

10.6 Preparing the Paxster for maintenance

All of the necessary safety measures must be taken to avoid accidents when carrying out maintenance and repairs. The following preparations must be made:

- Park the vehicle on a level surface
- Park the vehicle securely, see chapter 7.7
- Place the keys or key fob safely and safeguarded against unintended use
- When you are working beneath the raised vehicle, secure it to prevent it from lowering, tipping, or sliding / rolling away.
- Make sure that the working area is safe and provides sufficient safety for the work to be carried out
- Provide proper means of containing spills and residue of chemicals, oil, and cleaning agents.
- Make sure the loading areas are empty and no items can fall off the vehicle

WARNING ⚠

Always safeguard the vehicle against:

- Unintended activation
- Rolling, sliding, or tipping
- Lowering when working under a raised vehicle.

10.7 Cleaning

Cleaning the vehicle is essential for safe driving, particularly cleaning the windscreen and lights.

A clean floor is important for entering and exiting the vehicle safely and preventing sliding and falling.

10.7.1 Preparation for cleaning

Prior to any cleaning, please perform the following pre-operational steps:

- Disconnect the charging cable from the vehicle and the 230 V power supply, and store it in a safe and dry location
- Park the vehicle safely
- Make sure that you are in a location that is big enough for vehicle cleaning, and that cleaning is allowed
- Remove all loads from the vehicle
- Remove personal belongings from the vehicle

NOTICE ⚠

Non-professionals are not allowed to clean any electrical outlets, intakes or cable plugs!

10.7.2 Cleaning plastic surfaces

All coloured plastics are made of from ABS. Only use mild car shampoo and plenty of water to clean these surfaces.

Exterior plastic surfaces can be cleaned using a high-pressure cleaner.

NOTICE ⚠

Maintain a distance of at least 30 cm between the high pressure cleaning nozzle and the vehicle.

Do not use a high-pressure cleaner in the interior.

Do not use an automated car wash!

Paxster recommends using low pressure cleaners or manual washing:

- Remove groove dirt with a low-pressure cleaner / garden hose with a nozzle
- Remove dirt with a soft sponge or microfibre cloth and car shampoo with plenty of water
- In case of asphalt or tar, use agents for plastic parts which are approved for cars
- Wax the vehicle after cleaning to protect the plastic surfaces and keep it shiny

NOTICE ⚠

Do not use strong chemicals for cleaning the vehicle.

10.7.3 Cleaning the windscreen and the wind deflectors

The windscreen is a composite of soft, elastic plastic material for safeguarding pedestrians in a collision, and a safety glass insert for safeguarding the driver in the event of collisions.

The wind deflectors are made from transparent plastic material.

NOTICE ⚠

Maintain a distance of at least 30 cm between the high pressure cleaning nozzle and the vehicle.

NOTICE ⚠

Do not use strong chemicals for cleaning the vehicle.

Paxster recommends using low pressure cleaners or manual washing:

- Remove groove dirt with a low-pressure cleaner / garden hose with a nozzle
- Remove insects using car insect remover and a soft sponge
- remove remaining dirt with a soft sponge or microfibre cloth and car shampoo with plenty of water
- In case of asphalt or tar, use agents for plastic parts which are approved for cars
- Wax the vehicle after cleaning to protect the plastic surfaces and keep it shiny

10.7.4 Cleaning the floor

Paxster recommends the following measures to clean the floor:

- Remove groove dirt with a broom / swab
- remove remaining dirt with a soft sponge or microfibre cloth and car shampoo with plenty of water
- In case of asphalt or tar, use agents which are approved for cars

10.7.5 Cleaning the interior

The interior contains electronic components and sensitive surfaces. Be sure not to use too much water.

NOTICE ⚠

Do not use strong chemicals for cleaning the vehicle.

Seat and back rest:

Use a wet sponge and soft soap or cleaner for artificial leather for cleaning the seat cushion and back rest.

Use a wet sponge or microfibre cloth with textile cleaner for cleaning the seat belt.

WARNING

Do not use running water here. The battery and the electronic components are located beneath the seat and may be damaged. This may result in accidents.

Displays, switches and handles

Paxster recommends the following measures for cleaning the displays and switches:

- Remove groove dirt with compressed air or a soft swab
- Clean the surfaces with a clean, damp microfibre cloth
- Only apply a slight amount of pressure to the cloth
- Window cleaner applied to a cloth (not to the display) can be used to clean displays

NOTICE

Do not use running water here.

Other interior surfaces

Other interior surfaces are, for example, the steering bar, metal interior covers, plastic interior covers, wood-based panel of the front cargo area (22), the side compartments (23 | 24) and the windscreen.

Paxster recommends the following measures for cleaning the other interior surfaces:

- Remove groove dirt with compressed air or a soft swab
- Clean the surfaces with a clean, damp microfibre cloth
- A mild cleaning agent (car shampoo, car interior cleaner) can be applied to the cloth
- Only apply a slight amount of pressure to the cloth
- Window cleaner applied to the cloth can be used on the inside of the windscreen

10.7.6 Cleaning the wheels

Tyres and rims can be cleaned with normal tyre and rim cleaning agents. In case of aluminium rims, special cleaning agents are available on the market.

WARNING

Make sure that the brake discs and brake pads are not affected by the cleaning procedure.

10.8 Replacing wheels

The following rules apply to changing wheels:

- The tyres on an axle must be of same manufacturer and type
- All wheels on the vehicle must be of the same size
- All wheels must have either steel or aluminium rims.
- All tyres must be either summer or winter tyres

Changing wheels requires lifting the vehicle. The Paxster must be lifted at the front or rear. It must not be lifted at the left or right. Always lift one axle. See chapter 5.2 for lifting using jacks.

- Secure the vehicle as described in chapter 5.2.
- Slightly slacken the wheel nuts on the wheel(s) to replace them. Just slacken them by half a turn!
- Lift the vehicle as described in chapter 5.2
- You can lift the vehicle with a power tool prior to slackening a wheel.
- Slacken all wheel nuts
- Remove the wheel
- Inspect the brake for wear and damage
- Inspect the wheel bolts and nuts for damage

- Apply copper paste or similar to the wheel bolts to prevent them from rusting
- Replace the tyre or complete wheel
- Check if the new tyre has a direction indicator and that the inside is facing towards the vehicle (may be marked)
- Tighten the wheel nuts → see chapter 10.9

After lowering the vehicle, check the tyre pressure and ensure that both wheels on the same axle have the same pressure.

NOTICE ⚠

The air pressure in the tyres must be between 1.8 and 2.1 bar. If the pressure is too low, the range of the vehicle will be reduced considerably. Be aware that the air pressure can decrease in proportion to the outdoor air temperature.

10.9 Tightening the wheel nuts

The wheel nuts must be tightened as follows:

- Tighten all nuts slightly = “finger tight”.
- Adjust a torque wrench to **100 Nm** (tolerance +0 - 20 Nm)
- Use a torque wrench to tighten all nuts properly in the order shown below:
- Start with any nut you like

NOTICE

Always cross-tighten the nuts.

Use a torque wrench and apply torque of 100 Nm (tolerance +0 - 20 Nm).

WARNING

Do not apply torque of more than 100 Nm to the wheel nuts. This would weaken the bolt material and could lead to accidents by losing a wheel.

If the wheel nuts are accidentally tightened with more than 100 Nm, call Paxster to replace the wheel bolts / wheel hub / brake drum.

10.10 Checking the brake fluid level

The Paxster vehicle has two brake fluid reservoirs.

For the left handle brake fluid reservoir please refer to chapter 7.2.4 for more information.

The main brake fluid reservoir can only be checked by service staff by removing the vertical cover beneath the seat.

A low brake fluid level will be indicated to the user by the red brake fluid indicator (66), see chapter 7.2.5.

WARNING

If the brake fluid level indicator (66) is illuminated, stop the vehicle, and call for road assistance. The brake fluid has reached a critically low level, and brake failure may occur.

NOTICE

At each PPM, the service technician will check the main brake reservoir (and the left handle reservoir) and refill it if required.

10.11 PPM planned preventive maintenance

As a condition of your Paxsters warranty, you are responsible for properly maintaining your electric vehicle. To maintain your electric vehicle, you should either follow Schedule 1 or Schedule 2 as listed below. Use these guidelines to determine which maintenance schedule to use.

NOTICE

Maintenance must be carried out by Paxster or a Paxster certified Partner and reported to Paxster Norway to keep up the vehicles warranty and ensure your safety by following the Paxster guidelines, using original spare parts and having access to software updates and diagnosis systems.

10.11.1 Maintenance schedules

SCHEDULE 1	**SCHEDULE 2**
Use Schedule 1 if you primarily operate your EV under any of these conditions: • Driving mainly in dusty conditions or on rough, muddy, or salt-covered roads. • Last-mile applications, such as, but not restricted to, post, parcel or newspaper distribution.	With Schedule 2 fewer maintenance items are checked or replaced at regular intervals than with Schedule 1. Use Schedule 2 if you primarily operate your EV under less demanding conditions than those listed in Schedule 1.

10.11.2 6-month maintenance

The first maintenance must be carried out 6 months after initial registration / use. Replacement of the reduction gear oil is crucial at this stage, and must be carried out independently of the schedule or the mileage.

SCHEDULE 1
☐ Rotate the tyres ☐ Replace the reduction gear oil [SAE 70W 80 – 0.8 L] ☐ Inspect the following items: ○ Axles and suspension ○ Brake pads/shoes and rotors/drums ○ Front suspension and ball joints ○ Steering linkage and ball joints

SCHEDULE 2
☐ Rotate the tyres ☐ Replace the reduction gear oil [SAE 70W 80 – 0.8 L]

10.11.3 12-month maintenance

SCHEDULE 1
☐ Safety check ☐ Replace key fob battery ☐ Rotate the tyres ☐ Drive test ☐ EV System Analysis & Report ☐ Inspect the following items: ○ Axles & suspension ○ Brake lines and cables ○ Brake pads and rotors ○ Charging port and charging cable ○ Reduction gear oil ○ Front suspension ball joints ○ Steering linkage and ball joints

SCHEDULE 2
☐ Safety check ☐ Rotate the tyres ☐ EV System Analysis & Report ☐ Inspect the following items: ○ Brake pads and rotors ○ Charging port and charging cable ○ Reduction gear oil

10.11.4 24-month maintenance

SCHEDULE 1
☐ Safety check ☐ Drive test ☐ Replace key fob battery ☐ Rotate the tyres ☐ EV System Analysis & Report ☐ Inspect the following items: ○ Axles & suspension ○ Brake lines and cables ○ Brake pads and rotors ○ Charging port and charging cable ○ Reduction gear oil ○ Front suspension ball joints ○ Steering linkage and ball joints

SCHEDULE 2
☐ Safety check ☐ Drive test ☐ Replace key fob battery ☐ Rotate the tyres ☐ Inspect the following items: ○ Axles & suspension ○ Brake lines and cables ○ Brake pads and rotors ○ Charging port and charging cable ○ Reduction gear oil ○ Front suspension ball joints ○ Steering linkage and ball joints

10.11.5 36-month maintenance

SCHEDULE 1
☐ Safety check ☐ Drive test ☐ Rotate the tyres ☐ Replace the brake fluid [Dot.4] ☐ EV System Analysis & Report ☐ Inspect the following items: ○ Axles and suspension ○ Brake pads and rotors ○ Charging port and charging cable ○ Front suspension and ball joints ○ Steering linkage and ball joints

SCHEDULE 2
☐ Safety check ☐ Rotate the tyres ☐ EV System Analysis & Report

10.11.6 48-month maintenance

SCHEDULE 1
☐ Safety check ☐ Drive test ☐ Replace the reduction gear oil [SAE 70W 80 – 0.8 L] ☐ Replace key fob battery ☐ Rotate the tyres ☐ EV System Analysis & Report ☐ Inspect the following items: ○ Axles & suspension ○ Brake lines and cables ○ Brake pads and rotors ○ Charging port and charging cable ○ Reduction gear oil ○ Front suspension ball joints ○ Steering linkage and ball joints

SCHEDULE 2
☐ Safety check ☐ Replace the brake fluid [Dot.4] ☐ Drive test ☐ Rotate the tyres ☐ Inspect the following items: ○ Brake pads and rotors ○ Charging port and charging cable ○ Reduction gear oil

10.11.7 60-month maintenance

SCHEDULE 1
☐ Safety check ☐ Drive test ☐ Replace key fob battery ☐ Rotate the tyres ☐ EV System Analysis & Report ☐ Inspect the following items: ○ Axles & suspension ○ Brake lines and cables ○ Brake pads and rotors ○ Charging port and charging cable ○ Reduction gear oil ○ Front suspension ball joints ○ Steering linkage and ball joints

SCHEDULE 2
☐ Safety check ☐ Replace key fob battery ☐ Rotate the tyres ☐ Inspect the following items: ○ Axles & suspension ○ Brake lines and cables ○ Brake pads and rotors ○ Charging port and charging cable ○ Reduction gear oil ○ Front suspension ball joints ○ Steering linkage and ball joints

10.11.8 Other maintenance intervals

Paxster Gen 2.2 vehicles have defined maintenance intervals of 1 year. Maintenance checklists are provided until the 96 month maintenance. Please refer to the service and maintenance guide for further information.

If your vehicle is older than 96 months, the service plans must be repeated every second year.

11 Inspection after accidents

Paxster vehicles often face a challenging existence within the last mile logistics, and accidents occur. Particularly in the last mile sector, downtime must be reduced and the Paxster vehicle needs to be operational. But: safety first!

WARNING ⚠

After an accident it is recommended to contact Paxster for a check of the vehicle to ensure that it is roadworthy and safe.

Please contact your Paxster partner, particularly if an accident involves safety-critical components such as:

- Collision between a wheel and a hard object such as concrete or stone
- Leaving off the road
- Landing in a ditch
- Struck on a wheel by another vehicle

WARNING

Regardless of what happened in a small-scale accident, carefully inspect the vehicle. In the event of:

- Changes to drive train noise
- Uneven brake performance
- Dragging to one side
- Damage to the windscreen
- Sharp edges of plastic components which could hurt the driver or third parties
- Failure or dislocation of lights
- Changes to directional stability

Inform your supervisor immediately and take the vehicle out of service.

Paxster technicians are trained to find hidden damage and we can usually fix all problems on the first visit.

12 Disposal – second drive program

If you no longer need your Paxster or it has become too old for your purpose, Paxster will take it back and refund a residual value or a marked value.

Please contact your local Paxster partner for a residual value assessment.

INFORMATION

Paxster takes back all vehicles as part of our company environmental policy.

INFORMATION

If possible, the vehicle will be part of the Paxster 2nd Drive program, where vehicles will be completely stripped down and refurbished to give them second life and not be sent to a scrap yard. If, for example, it is not possible to refurbish the vehicle because of an accident, components may be used in refurbished vehicles.

INFORMATION

This further reduces the environmental footprint of the Paxster and reduces the amount of waste.

To make procedure easier for you, Paxster can take care of assessing the vehicle, picking it up and delivering it back to Norway for refurbishment.

For further information, please visit: https://paxster.no/second-drive/