Notes

Find a retailer in your area:

User guides, service book and declarations of conformity are available for download in PDF format at:
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*dependent on model
I. Introduction

This user guide contains information on how to use, maintain and look after the battery and battery charger of your Pedelec Shimano Steps E6000.

DANGER

Before using your pedelec for the first time, carefully read this user guide. Please also read the other items in the information pack ⇒ II. Information pack Page EN-5. Familiarise yourself with the appearance and meaning of the safety information symbols. Ensure to contact your cycle dealer ⇒ III. Cycle dealers Page EN-7 in the event clarification is required. Failure to comply with safety symbols and instructions can result in death, very serious injuries and/or damage to the bicycle. The manufacturer's liability and any warranty are deemed null and void for any damage or injury caused by a failure to adhere to safety symbols and instructions.

Ensure that your cycle dealer has provided you with all the documents included with the bike upon delivery. Keep this user manual and the other documents in the information pack for future reference. Please pass on the user manual and information pack to other people who will use, maintain or repair this pedelec. Failure to do so can lead to uncertainty which may cause death, severe injuries and/or damage to equipment.

I.I Explanation of the safety information symbols

DANGER

This symbol combined with the signal word "DANGER" indicates a potentially dangerous situation. Failure to comply with this safety instruction can result in death or very serious injuries.

WARNING

This symbol in conjunction with the signal word "WARNING" indicates a potentially dangerous situation. Failure to comply with this safety warning can result in serious injury.
I.I  The Pedelec Shimano Steps E6000

Your Pedelec Shimano Steps E6000 is an EPAC (electrically power assisted cycle). When the assist mode is switched on, the electric motor provides assistance as long as you are pedalling. You can control the degree of assistance, which is adjusted using various assist modes. The drive assistance is dependent on the force and speed of your pedalling and the speed you are travelling. Motor assist stops as soon as you stop pedalling and when the battery is discharged or if you reach a speed of 25 km/h. So pedalling harder is required if you want to travel faster than 25 km/h.

II.  Information pack

In addition to this user guide, your Pedelec Shimano Steps E6000 comes with a Shimano original user guide, booklet and CD, service book, two declarations of conformity and component guides, and if you have bought a Kalkhoff or Raleigh pedelec, a guarantee card. The following points describe the contents of the information pack in more detail.

II.I  Shimano original user guide

The Shimano original user guide contains information on the display and the Pedelec motor. You can download the guide in different languages from si.shimano.com.
## II.II Booklet and CD

The booklet contains a “Quick-start guide” describing how to check the torque settings, attach the pedals and adjust the height of the saddle. At the back of the booklet is a CD. The CD includes the “Original User Manual | General” in several languages, which provides general information on the different types of bikes and their components. If you go online you can follow a link to our website. The CD can be played on any standard PC or laptop. Proceed as follows:

**Method A**

1. Insert the CD.
2. Left-click the shelexec.exe file twice.
3. Select the required language.

**Method B**

1. Insert the CD.
2. Right-click once "Open Folder to Show Files".
3. Left-click "Start" twice.
4. Select the required language.
5. Select "Open User Guide from CD" or "Check Online for New Version of User Guide".

## II.III Component guides

In the component guides you will find important information on using and maintaining the components of your pedelec. They often also provide information on any warranties. If there is no specific user guide included for the particular component you are interested in, look in our “Original User Guide | General” (CD) ⇒ II.II Booklet and CD Page EN-6 or on the component manufacturer’s website. You can also find a list of our component manufacturers at www.derby-cycle.com/en/downloads/downloads.html.
**II.IV Service book**

In the accompanying service book, you will find the warranty terms, a list of wearing parts, a cycle passport, and forms to use for initial sale, maintenance and owner changes.

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**DANGER**

*Keep the service book appropriately up-to-date and adhere to the maintenance intervals.* Components can fail if wear and damage are not identified in good time. If this happens whilst you are cycling, you could injure yourself very seriously or even die. Replace any worn, damaged or bent components before using the bike again.

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**II.V EU declarations of conformity**

EU declarations of conformity confirm that we have complied with all of the safety requirements of the regulations applicable to the pedelec and the battery charger.

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**II.VI Guarantee card***

Since model year 2014 we have been offering you a guarantee of 10 years for all pedelec and S-pedelec frames – exclusively for Kalkhoff and Raleigh brands. You will find the terms of the guarantee on the guarantee card.

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*dependent on model

**III. Cycle dealers**

Ask our cycle dealers for advice. On Page 2 you will find a link to the brand website with all cycle dealers in your region.

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**IV. Legal regulations for pedelecs**

**IV.I International**

**DANGER**

*Never ride “hands free”.* You could fall off and seriously injure or even kill yourself – and also be liable for prosecution. You must always have at least one hand on the handlebars.

Always observe the relevant national traffic regulations. Otherwise you run the risk of a serious accident. Before using your pedelec abroad, find out about the regulations applicable in that country.

Like all bicycles, the pedelec must comply with the respective national road traffic regulations and applicable standards. If you carry out any technical modifications, bear in mind the relevant national traffic regulations and applicable standards. If the cut-off speed exceeds 25 km/h and/or the speed of the push assist exceeds 6 km/h, the pedelec will become liable to mandatory registration and insurance. Technical modifications can impair the function of your pedelec, resulting in damage to components. If this happens while you are riding the bike you could be severely injured or killed. Furthermore, it will invalidate the manufacturer's liability, warranty and guarantee (where applicable).

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* dependent on model
The use of cycle paths is regulated as for normal bicycles.

The use of children trailers and cycle trailers is generally permitted for pedelecs.

DANGER
Before you use a trailer bike or trailer, make sure you read Section 4.1.2 Trailer bikes and trailers Page EN-29. Otherwise there is a risk of serious injury or death.

IV.II Germany

The following regulations (not exhaustive) were applicable in Germany when this guide was compiled (01/2017):

» The motor may only be used as an aid to pedalling, i.e. it may only "help" when the rider is actively pedalling.
» The average motor power must not exceed 250 W.
» The motor power must continue to fall as the speed of the bike continues to increase.
» The motor must cut out automatically at 25 km/h.

For you, this means:
» There is no obligation to wear a helmet.

DANGER
In the interests of your own safety, a suitable helmet should always be worn. A cycle helmet can protect you from severe injuries. Make sure that the helmet fits properly.

» You do not require a driving licence.
» There is no requirement for compulsory insurance.

IV.II.I Lights

In Germany, the requirements for lights on bicycles is regulated in Section 67 of the Road Traffic Licensing Regulation (StVZO) and in the Technical Requirements for vehicle parts. Lights include both battery and dynamo-powered lights, and include reflectors that work without a power supply and simply reflect external light.

<table>
<thead>
<tr>
<th>Light type</th>
<th>Number</th>
<th>Position</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front light</td>
<td>1</td>
<td>Front</td>
<td>White light</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The illuminance must be at least 10 lux at the centre of the beam at a distance of 10 metres.</td>
</tr>
<tr>
<td>Reflector</td>
<td>At least 1</td>
<td>Front</td>
<td>White</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The reflector can be integrated into the front light.</td>
</tr>
</tbody>
</table>
### IV.II.II Replacement bulbs

The replacement bulbs you will need depend on the type of lights fitted on your bike. The table below tells you what type of bulb you need:

<table>
<thead>
<tr>
<th>Type</th>
<th>Power supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front light (LED, incandescent)</td>
<td>6 V 2.4 W</td>
</tr>
<tr>
<td>Front light halogen</td>
<td>6 V 2.4 W</td>
</tr>
<tr>
<td>Rear light</td>
<td>6 V 0.6 W</td>
</tr>
<tr>
<td>Rear light with parking light</td>
<td>6 V 0.6 W</td>
</tr>
<tr>
<td>Lighting with LED lamps</td>
<td>LED lamps are not replaceable</td>
</tr>
<tr>
<td>Hub dynamo</td>
<td>6 V 3 W</td>
</tr>
</tbody>
</table>

### IV.II.2 Disposal

Do not dispose of the drive system, display, easy-reach control, pedelec battery or charger in the household waste. Hand them in at the designated places (such as a recycling centre, battery collection point or cycle dealer).
V.  Intended use

VI. Pedelec weight*

Pedelecs are heavier than normal bicycles. The exact weight depends on the equipment fitted. If you want to know the precise weight of your pedelec, we recommend having it weighed by a cycle dealer. Most dealers have a professional and accurate cycle weigher.

VI.I Overall weight

DANGER

Do not exceed the permitted overall weight of the pedelec as this can result in fracturing or failing of important safety parts (such as the brakes). If this happens while you are riding the bike, it can lead to severe falls – with fatal consequences.

**Overall weight** = Weight of the bike + weight of the rider + weight of the trailer bike or trailer + weight of luggage and/or child

<table>
<thead>
<tr>
<th>Bike type</th>
<th>Overall weight permitted</th>
<th>Weight of rider**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedelec Shimano Steps E6000</td>
<td>130 kilograms</td>
<td>Max. 102 kilograms</td>
</tr>
</tbody>
</table>

** for a pedelec weighing 28 kilograms.

V.I Pedelec

This bicycle is designed and equipped for use on public roads and paved paths. It can also be used on non-challenging terrain. The manufacturer and dealer accept no liability for damage resulting from any use beyond this definition and/or failure to comply with the safety information and instructions in the user guide.

This applies particularly to off-road use, overloading and failure to properly rectify faults.

Also included in the definition of intended use are conformance to the operating, maintenance and repair conditions in the user guide and service book ⇒ II.IV Service book Page EN-7 stipulated by the manufacturer. Fluctuations in the consumption and power of the battery and a reduction of capacity ⇒ 5.3.1.2 Capacity Page EN-35 with increasing age are common and technically unavoidable, and as such do not constitute material defects.
1. **General safety information**

Comply with the safety and user instructions at the start of the following sections.

**DANGER**

We discourage allowing children under the age of 14 years to ride pedelecs. They may not be able to cope with the speed. Serious accidents and falls might result.

**Wear a cycle helmet.** While there is no legal obligation to wear one, you should always wear a suitable cycle helmet for your own safety. A cycle helmet can protect you from severe injuries. Make sure that the helmet fits properly.

**Keep your hands and other body parts and clothing away from moving parts,** otherwise you can become ensnared, have a serious fall and injure yourself.

**Adapt your riding style to the prevailing traffic conditions,** otherwise you could fall off and involve yourself and others in a serious accident. Take into consideration the longer braking distances needed on wet or icy roads. Think ahead, anticipating the actions of other road users and reduce your speed. Avoid sudden jerky movements of the handlebars and braking actions. Dismount if you ever feel unsafe.

**Only use the bicycle for its intended purpose** ⇒ **V. Intended use Page EN-10,** otherwise component failure may result. If this happens whilst you are cycling, you could injure yourself very seriously or even die.

**DANGER**

Check that the brakes work and that the handlebars can move freely before every ride. Do not use the bike if it is not in perfect technical condition. If you are unsure, ask your cycle dealer to check it over.

Inspect your pedelec before every trip, and after each time it has been transported anywhere or left unattended ⇒ **4. Before every trip Page EN-28.** Components might fail if wear and damage are not detected early enough. If this happens whilst you are cycling, you could injure yourself very seriously or even die. The additional power means higher loads are applied to wearing parts on a pedelec than on a normal cycle. Replace any worn, damaged or bent components before using the bike again.

**Do not exceed the overall weight permitted for the pedelec because parts important for safety might fracture or fail** ⇒ **VI.I Overall weight Page EN-10.** If this happens while you are riding the bike, severe falls might result – with fatal consequences.

Contact your cycle dealer when wearing parts and other components need to be replaced. We recommend asking your cycle dealer to assemble and adjust the bike. Otherwise, components could become loose due to a faulty assembly. If this happens whilst you are cycling, you could injure yourself very seriously or even die. If you do have to tighten something yourself, a full list of torque settings is in Section ⇒ **8. Torque settings Page EN-46** (strict adherence to which is a requirement).
**CAUTION**

Do not open up the motor, display, battery or charger as you could injure yourself. Parts might also be damaged beyond repair, invalidating the warranty. Contact your cycle dealer when problems arise.

**IMPORTANT**

Always park your pedelec so that it cannot tip over. Components can be damaged if the bike tips over. If your bike is not equipped with a kick stand, one can be fitted if required. Please contact your cycle dealer.

Do not clean the pedelec with a water hose or high pressure washer. Although the components are sealed, damage to the cycle may still result. Clean the pedelec with a soft damp cloth.

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**DANGER**

Only use original replacement parts. Replacement parts from other manufacturers can impair the function of your pedelec. Serious accidents can result.

Ask your cycle dealer to show you how to use, and explain, the special features of the components. Please also follow the component guides. We recommend asking your cycle dealer to assemble and adjust the bike. Otherwise, components could become loose due to a faulty assembly. If this happens whilst you are cycling, you could injure yourself very seriously or even die. If you do have to tighten something yourself, a full list of torque settings is in Section 8. Torque settings Page EN-46 (strict adherence to which is a requirement).

**WARNING**

Do not ride in unfavourable lighting conditions (fog, rain, dusk, darkness) without adequate lights IV.II.I Lights Page EN-8. Failure to do so can result in accidents and serious injuries.

Always remove the battery before starting to work on the pedelec. The pedelec could switch on unexpectedly and you could be seriously injured.
2. Protection from theft, manipulation and loss

**DANGER**

Protect your pedelec from unauthorised access. Serious injury may result if third parties modify components (e.g. the brakes) without your knowledge. Inspect your pedelec before every trip, and after each time it has been transported anywhere or left unattended.

Quick-release wheels should be attached to a fixed object together with the frame. This prevents the wheel from being stolen. Alternatively, the quick-release skewers can be replaced by an anti-theft device. Contact your cycle dealer if you have questions on this.

Use a high-quality bike lock. Invest about 10% of the purchase price of the bike in locks. Your cycle dealer will be able to fit a suitable frame lock if your bike does not already have one. You can also use other types of bike lock. Ask your cycle dealer for advice.

Make a note of the important details of your pedelec (e.g. in the service book, bike passport) and have it registered by the police. This makes it easier to describe and identify if stolen.

Have the police code your pedelec; the address and initials of the owner are engraved on the frame in an encrypted form. Coding makes the illegal resale of a bike more difficult and deters thieves. A coded bike also makes it easier to identify the owner.

Bicycle theft is often covered by household contents insurance. Check the terms of your insurance policy as soon as possible.

The following measures can help you to protect your pedelec from theft and manipulation and to recover it if it has been stolen:

- **Always lock the bike and battery even if you leave it for a short while.** Ideally, the lock(s) should block the wheel powered by the motor. Do not leave the key in. To be on the safe side, you can also remove the battery. A pedelec must also be secured with a lock when parked outside residential areas (e.g. in a shed or basement).

- **Do not park your pedelec in deserted locations** – especially for long periods. If possible, park your pedelec in private or communal garages or individual bike lockers which have surveillance.

- **Attach your pedelec to a fixed object (such as a tree, street lamp or fence)** so that it cannot be carried away.
3. Before your first ride

Make sure that your pedelec is adjusted to your height and ready to use. Familiarise yourself with the basic functions of your pedelec.

DANGER

Ask your cycle dealer to show you how to use, and explain, the special features of the pedelec and its components. Please also follow the component guides. We recommend having your cycle dealer perform all assembly and adjustment work. Otherwise, components could become loose due to a faulty assembly. If this happens whilst you are cycling, you could injure yourself very seriously or even die. If you do have to tighten something yourself, a full list of torque settings is in Section 8. Torque settings Page EN-46 (strict adherence to which is a requirement).

Adjust the pedelec to your height. If the bike is not correctly adjusted to your height, you can lose control of the bike and fall badly.

Practise braking and riding with the assist function in a safe place before venturing into traffic. If you do not familiarise yourself with the operation and higher speed of your pedelec, you could cause a serious accident. Ride in ECO mode until you feel confident enough to try the higher modes. Dismount if you ever feel unsafe.

3.1 Attaching the pedals

1. Screw the right-hand pedal (marked ‘R’) into the right-hand pedal crank in a clockwise direction.

2. Screw the left-hand pedal (marked ‘L’) anticlockwise into the left-hand pedal crank.

DANGER

Screw the pedals in straight, otherwise you could damage the thread on the pedal crank; if this happens when you are cycling, a severe fall could result.

3. Tighten both pedals towards the front wheel to a torque of 40 Nm.
3.2 Adjusting the saddle height

3.2.1 Determining the correct saddle height

1. Sit on the pedelec and at the same time lean against a wall.
2. Turn the foot pedal on the opposite side to the wall to its lowest point.
3. Place your heel on the pedal. Your leg should be fully extended.
4. If your leg is not fully extended when your heel is on the pedal, raise the saddle. Lower the saddle if you cannot reach the pedal. The following sections explain how to adjust the saddle height on your bike. The seatpost can be fastened using the saddle clamp bolt ➔ 3.2.2 Adjusting the saddle height: Saddle clamp bolt(s)* Page EN-15 or quick-release skewer ➔ 3.2.3 Adjusting the saddle height: Quick-release skewer* Page EN-16.

**WARNING**

The seatpost is marked to indicate how far you may pull it out from the frame. Never pull the seatpost further out than the marking. This could cause it to bend or break, and cause you to fall.

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*dependent on model
3.2.3 Adjusting the saddle height: Quick-release skewer

**DANGER**

The quick-release skewer must be correctly closed before you set off. Otherwise the seatpost can loosen or fracture – if that happens while you are riding the bike you could fall off, resulting in serious injuries.

1. Open the quick-release skewer by swinging the lever by 180°. You will now usually be able to see the word ‘OPEN’ on the inside of the lever.

2. Close the quick-release skewer by swinging the lever by 180°. You will now usually be able to see the word ‘CLOSE’ on the outside of the lever.

3. Try to twist the saddle to check that it is firmly fixed.

**Quick-release skewer is too easy to close**

1. Turn the adjustment nut **clockwise**.
2. Swing the quick-release skewer closed again.

**Quick-release skewer is too stiff to close**

1. Turn the adjustment nut **anticlockwise**.
2. Swing the quick-release skewer closed again.

**DANGER**

It should be so hard to close the quick-release skewer that you need to use the ball of your hand (120 N: corresponds to a weight force of 12 kg). You should have the mark of the lever imprinted on your hand. Otherwise, it could open when you are cycling, which could lead to the seatpost coming loose and causing you to fall. If you close the quick-release skewer too tightly, the seatpost can break; if this happens when you are cycling, you could fall.

*dependent on model
3.3 Shifting and tilting the saddle

DANGER

Never clamp the saddle in the curve of the saddle rail; always do it in the straight section. Only shift the saddle within the straight section (fig. 1). Saddles that stay clamped outside this area can fail (fig. 2).

Use a torque wrench to tighten the clamping screws. Observe the specified torque setting. If no value is shown on the component, use the torque settings from the following table:

<table>
<thead>
<tr>
<th>Thread</th>
<th>Tightening torque [Nm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>M5 / M6 / M8</td>
<td>M5: 5.5 / M6: 5.5 / M7: 14 / M8: 20</td>
</tr>
</tbody>
</table>

Failure to comply can result in screws/bolts becoming loose, tearing away or fracturing. If that happens while you are riding the bike, components may come off and you could have a severe crash. If screws are overtightened, components can also be damaged.

3.3.1 Single-screw support: Shifting and tilting the saddle

1. Loosen the clamping screw by turning it anticlockwise. Turn the screw completely two to three times at most or the whole mechanism could fall apart.

2. Move the saddle backwards or forwards as required.

3. Tilt the bicycle saddle to the desired angle.

4. Tighten the clamping screw by turning it clockwise with a torque wrench.

5. Ensure that the newly-tightened saddle does not tip; test it by pressing down on the front and back alternately.
3.3.2 Twin-screw supports: Shifting and tilting the saddle

1. To move the saddle, loosen the front and rear screws by turning them anticlockwise. Turn the screws completely two to three times at most or the whole mechanism could fall apart.

2. Move the saddle backwards or forwards as required.

3. Tighten the screws using a torque wrench to turn them clockwise.

4. To alter the angle of the saddle, loosen the front screw by turning it anticlockwise. Turn the screw completely two to three times at most or the whole mechanism could fall apart.

5. Tighten the front screw by the same number of turns.

6. Ensure that the newly-tightened saddle does not tip; test it by pressing down on the front and back alternately.

3.3.3 Clamp attachment: Shifting and tilting the saddle

1. Turn the clamping nut clockwise to loosen it. You may need to keep the nut on the other side in place with a second key.

2. Move the saddle backwards or forwards as required.

3. Tilt the bicycle saddle to the desired angle.

4. Turn the clamping nut clockwise to tighten it. You may need to keep the nut on the other side in place with a second key. Observe the correct torque setting.

5. Ensure that the newly-tightened saddle does not tip; test it by pressing down on the front and back alternately.

For 1. Loosen clamping nut
3.4 Adjusting the sprung seatpost

1. Remove the seatpost.
2. Tighten the suspension adjustment screw with an Allen key (6 mm AF) in the clockwise direction to reduce the suspension or loosen anticlockwise to increase the suspension.

**DANGER**

The suspension adjustment screw must not protrude from the seatpost, otherwise the screw/seatpost can loosen – if this happens while riding you could fall off, resulting in serious injuries.

3.5 Adjusting the height and angle of the handlebars

**DANGER**

Ask your cycle dealer to perform these adjustments. You can otherwise run the risk of loosening the handlebars which could lead to a fall causing severe injuries.

3.6 Switching the lights on and off*

A slider control is located on the rear of the front light. Depending on which way you move it, the front and rear light will be on or off when you are riding.

3.7 Braking

Make sure that you can always reach the brakes comfortably and that you are familiar with their operation and position. Note which brake lever operates the front and rear brakes. If your pedelec is fitted with a back pedal or coaster brake, you can operate it by pedalling backwards.

*dependent on model
3.8 Chain*

**WARNING**

Always remove the battery before starting to work on the pedelec. The cycle could switch on without warning and you could be seriously injured.

**CAUTION**

Check the chain for signs of wear before every trip. A worn or damaged chain can break. If this happens while you are riding the bike, you can easily injure yourself.

**DANGER**

Practise braking in a safe place before venturing into road traffic. In some instances, the braking can be different or stronger than what you are used to. If you do not take the time to familiarise yourself with the braking effect, you could cause a serious accident. Practise until you feel safe. Dismount if you ever feel unsafe.

**Rim brakes:** Avoid continual, uninterrupted braking on long downhill stretches because it causes the braking effect to diminish and/or tyre damage. Brake intermittently with intervals in between to allow the airflow to cool the braking system. If necessary, make regular stops to ensure adequate cooling.

Replace the brake pads when they reach the safe wear limit. Using worn brake pads can result in serious injuries with fatal consequences.

**CAUTION**

Disc brakes: Avoid touching the brake discs after intensive use of the brakes – they can become very hot. You could burn yourself if you touch them.

**WARNING**

**Disc brake**

Avoid touching the brake discs after intensive use of the brakes – they can become very hot. You could burn yourself if you touch them.
3.8.1 Measuring and adjusting the chain tension

Measuring the chain tension

1. Remove the pedelec battery.
2. Press the chain up or down at its taustest point. The tension is correct if you can move the chain up and down by about 5 mm.
3. Check the chain at four or five points over a complete revolution of the crank.

Adjusting the chain tension

1. Remove the pedelec battery.
2. Undo the rear wheel nuts.
3. Remove the brake anchor as required.
4. Pull the rear wheel back in the drop-outs until the chain just has the permissible amount of play.
5. Carefully tighten all bolts in a clockwise direction to a torque setting of 35 – 40 Nm. Make sure the wheel is refitted straight.

3.8.2 Checking for chain wear

1. Remove the pedelec battery.
2. Check chain wear with a chain wear indicator or vernier calliper.
3. Replace the chain if it is worn.

3.8.3 Chain cleaning and maintenance

Lubricate the chain after riding in the rain. Clean and lubricate it when you clean the wheel.

1. Remove the pedelec battery.
2. Brush the chain coarsely with a hand brush.
3. Then remove the old chain oil with a dry cloth.
4. Now you can oil the chain. Follow the application instructions from the chain oil supplier.
5. When you have finished, turn the crank to distribute the chain oil.
3.9 Gears

The gears are operated by controls on the handlebars (gear lever, twist grips, buttons, ...). The gear shift allows you to adjust the gears of your bicycle, and hence the transmission, to current riding conditions. On a straight level stretch, a higher gear is sensible to achieve and maintain a higher speed without having to pedal too much. As soon as you start going uphill, a lower gear is beneficial because it is important to be able to climb the hill with little effort. Select the gears so that your legs are always moving at a steady pace.

If your Pedelec has a FAG electronic shift unit, you can use the menu to set the gear in which you want to start off following every stop.

Derailleur*

This system lifts the chain on to a sprocket when the gear is changed. The chain must continue moving so that the teeth of the sprocket can engage with the chain links easily and smoothly. For a successful gear change, therefore, you must keep pedalling forwards, never backwards – but at the same time pedal lightly without force.

Hub gear*

Here the change of gear takes place inside the rear wheel hub. Space is very tight inside the hub, so it is sensible to pedal lightly when changing gear.

*dependent on model
3.10 Wheel

3.10.1 Changing the wheel

3.10.1.1 Wheel with axle nuts*

Removing the rear wheel

1. Remove the pedelec battery.
2. Change the gear to the one recommended by the gear manufacturer for disassembly.
3. Remove the gear shift cable from the rear wheel.
4. Undo the axle nuts using a 15 mm spanner, turning anticlockwise.
5. Take off the chain.
6. Remove the rear wheel.

Replacing the rear wheel

1. Attach the chain.
2. Insert the rear wheel centrally in the drop-outs as far as it will go.
3. Re-attach the gear shift cable.
4. If necessary, fasten the brake anchor.
5. Tighten the axle nuts using a 15 mm spanner, turning clockwise.
6. Reinsert the battery.

3.10.2 Quick-release wheels*

**DANGER**

Front wheel: The quick-release skewer must be positioned on the opposite side to the brake disc (where fitted). If the quick-release skewer is on the same side as the brake disc, there is a risk that they can clash and lock the front wheel (see diagram), which can cause a serious accident.

All quick-release systems must be correctly tightened before you set off. Otherwise the components can loosen – if that happens while riding you could fall off, resulting in serious injuries.

Removing the front wheel

1. Remove the pedelec battery.
2. Open the axle lever by folding it by 180°. You will now usually be able to see the word ‘OPEN’ on the inside of the lever.
3. Undo the adjustment nut by turning it slightly anticlockwise.

*dependent on model
4. Remove the front wheel.

Replacing the front wheel

1. Insert the wheel into the front fork ends.

2. Gently turn the adjustment nut on the quick-release skewer in a **clockwise** direction.

3. Close the quick-release skewer by swinging the lever back 180°. You will now usually be able to see the word ‘CLOSE’ on the outside of the lever.

**DANGER**

**Quick-release skewer is too easy to close**

1. Open the quick-release skewer.
2. Turn the adjustment nut **clockwise**.
3. Swing the quick-release skewer closed again.
4. Repeat if necessary.

**Quick-release skewer is not easy to close**

1. Open the quick-release skewer.
2. Turn the adjustment nut **anticlockwise**.
3. Swing the quick-release skewer closed again.
4. Repeat if necessary.

**DANGER**

Quick-release skewers cannot be closed by simply turning the lever.

If you have released the rim brakes to remove the wheel, you must close them again, otherwise you will not be able to brake and run the risk of serious injury.

**IMPORTANT**

Detach all cables from the wheel (e.g. lighting cables), otherwise you could tear them.

If your bike is fitted with rim brakes it is sensible to release them before you remove the front wheel. Otherwise you may not be able to remove the front wheel.

**DANGER**

It should be so hard to close the quick-release skewer that you need to use the ball of your hand (120 N: corresponds to a weight force of 12 kg). You should have the mark of the lever imprinted on your hand. Otherwise it could open when you are cycling, which could lead to the wheel becoming loose and cause you to fall.
3.10.3 Wheel with axle shaft*

Removing the front wheel

1. Remove the pedelec battery.
2. Open the quick-release skewer on the front wheel by turning it down 180°.
3. Hook the quick-release skewer into the slot and turn it anticlockwise until the quick-release axle protrudes from the axle hole about 1 cm.
4. Lift out the front wheel and remove the quick-release axle.

IMPORTANT

Detach all cables from the wheel (e.g. lighting cables), otherwise you could tear them.

Replacing the front wheel

1. Apply a thin layer of grease to the quick-release axle.
2. Push the wheel into the front forks and align with the axle holes.
3. Reinsert the quick-release axle.
4. Move the quick-release lever to the open position.
5. Hook the quick-release skewer into the slot and turn it clockwise. This will screw the axle in the thread. Ensure that the wheel is correctly centred.
6. Close the quick-release skewer by swinging the skewer back 180°.

DANGER

It should be so hard to close the quick-release skewer that you need to use the ball of your hand (120 N: corresponds to a weight force of 12 kg). You should have the mark of the lever imprinted on your hand. Otherwise it could open when you are cycling, which could lead to the wheel becoming loose and cause you to fall.

*dependent on model
Quick-release skewer is too easy to close

1. Open the quick-release skewer.
2. Hook the quick-release skewer into the slot and turn it clockwise. This will screw the axle in the thread. Make sure that your wheel is correctly centred.
3. Close the quick-release skewer.
4. Repeat if necessary.

Quick-release skewer is not easy to close

1. Open the quick-release skewer.
2. Hook the quick-release skewer into the slot and turn it anticlockwise until the quick-release axle protrudes from the axle hole about 1 cm.
3. Close the quick-release skewer.
4. Repeat if necessary.

WARNING

Reattach any previously disconnected cables (e.g. lighting cables), otherwise you could tear them.

3.10.4 Rims

Wear

WARNING

Look out for deep grooves on both rims. The rims could fracture and cause a fall. Replace rims as soon as you detect signs of wear.

Many rims have a wear indicator. If it can no longer be felt at a certain point, the rim is worn.

Cleaning

1. Remove the pedelec battery.
2. Brush the rims with a hand brush. Heavier soiling can be removed with a soft, damp cloth.

IMPORTANT

When you are cleaning the rims, make sure that no water gets into the motor. Water ingress can damage the motor.

3. Leave to dry.
3.10.5 Tyres

**DANGER**

**Do not either overinflate or underinflate the tyres.** If the air pressure is too high, this could lead to a worst-case scenario of the tyres bursting and you could fall. On the other hand, if the air pressure is constantly too low, the tyre can wear prematurely. The maximum permissible pressure is marked on the side of the tyre in bar and psi (pounds per square inch). You can measure the tyre pressure yourself by using a tyre gauge. Alternatively, you can contact your cycle dealer.

3.11 Suspension fork*

*Please observe the contents of the fork manufacturer's user guide!*

3.11.1 Compression rate

The compression rate refers to the speed at which a spring is compressed. To adjust the compression rate, move the rotary controller towards - (= greater compression rate) or + (= lower compression rate).

3.11.2 Rebound damping

Rebound damping describes the speed at which a spring expands. To adjust the rebound damping, rotate the red setting wheel on the underside of the fork to the open position (= greater spring expansion speed) or to the closed position (= lower spring expansion speed).

3.11.3 Lockout system

If your suspension forks are fitted with a lockout system, it is possible to lock the suspension. There are some riding situations where that can be useful: for example, if you are riding up a hill or if you are standing up from the saddle when accelerating. To switch the suspension to fixed, turn the rotary control on the right-hand side of the fork to ‘LOCK’ (or alternatively: $\bullet$).

To reactivate the suspension, turn the control to the ‘OPEN’ position.

<table>
<thead>
<tr>
<th>LOCK/ $\bullet$</th>
<th>Suspension locked</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN</td>
<td>Suspension activated</td>
</tr>
</tbody>
</table>

**DANGER**

**Do not ride over rough terrain with the suspension locked.** It can damage the suspension forks. A broken fork could cause you to fall off and seriously injure yourself.

*dependent on model*
3.11.4 Air system*

On some suspension forks it is possible to alter the air pressure. You will need assistance from your cycle dealer to do this, or if you feel confident of doing it yourself, a suspension fork pump with a pressure gauge and the suspension fork manufacturer's installation manual. The valve with cap (e.g. marked ‘AIR’) is usually located on the left-hand side of the fork.

4. Before every trip

**DANGER**

Replace any damaged (e.g. cracks, grooves) or bent components before using the bike again. Not doing so can lead to essential parts failing and cause a serious fall.

Do not use the bike if it is not in perfect technical condition. If you are unsure, ask a cycle dealer to check it over.

We recommend asking your cycle dealer to assemble and adjust the bike. Otherwise, components could become loose due to a faulty assembly. If this happens whilst you are cycling, you could injure yourself very seriously or even die.

Inspect your pedelec before every trip, and after each time it has been transported anywhere or left unattended. Use the following checklist to help you.

<table>
<thead>
<tr>
<th>Type</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame / forks</td>
<td>Check the frame and forks for visible warping, cracks and damage.</td>
</tr>
<tr>
<td>Handlebars / front stem</td>
<td>Check they are seated securely.</td>
</tr>
<tr>
<td>Saddle / seatpost</td>
<td>Check that the bell is working and attached correctly and securely.</td>
</tr>
<tr>
<td>Wheels</td>
<td>Check the condition (damage, foreign bodies), concentricity and pressures of the tyres.</td>
</tr>
<tr>
<td></td>
<td>The maximum permissible pressure is marked on the side of a tyre in bar and psi (pounds per square inch). Tyres should not be inflated above or below this pressure.</td>
</tr>
<tr>
<td></td>
<td>Check the valves are seated securely.</td>
</tr>
<tr>
<td></td>
<td>Visually inspect the rims for damage and wear.</td>
</tr>
<tr>
<td></td>
<td>Check that the quick-release skewers / through-axles (if available) are secured correctly.</td>
</tr>
<tr>
<td>Chain</td>
<td>Check the chain, pinions and sprockets for wear and damage.</td>
</tr>
<tr>
<td>Brakes</td>
<td>Check that the brake system (including brake levers) is working and attached correctly and securely.</td>
</tr>
<tr>
<td></td>
<td>Visual inspection of the brake pads/disks.</td>
</tr>
<tr>
<td>Lights</td>
<td>Check that the light system is adjusted and in working order.</td>
</tr>
<tr>
<td></td>
<td>Check that reflectors are affixed in accordance with applicable national traffic regulations.</td>
</tr>
<tr>
<td>Threaded joints</td>
<td>Check that all threaded joints are tightened as specified.</td>
</tr>
<tr>
<td>Luggage</td>
<td>Check it is attached securely.</td>
</tr>
</tbody>
</table>

*D dependent on model
4.1  Tips

4.1.1  Transporting your pedelec

**WARNING**

Remove panniers and other attachments during transport, as they can come off and cause serious accidents.

Always remove the battery before transporting the pedelec. There is a risk of injury due to accidental activation of the \(\oplus\) button. The battery could also fall from the docking station and be damaged. Use a special battery bag that protects the battery from heat, shocks and impacts.

By car: The bike rack must be designed for the higher weight of the pedelec \(\Rightarrow VI.I\) Overall weight Page EN-10, otherwise it can break and cause a serious accident. It is imperative to follow the guidance of the bike rack manufacturer.

**IMPORTANT**

Pedelecs carried on a rear-mounted bike rack must have suitable weather protection. This applies particularly to the docking station, which must be protected from water ingress. Water ingress can damage the motor and its components. Suitable covers are available from your dealer and online.

**Bus, train and plane:** Find out from your travel company well in advance if their regulations allow you to take your pedelec with you.

4.1.2  Trailer bikes and trailers

The use of trailer bikes and trailers is generally permitted for the Pedelec Shimano Steps E6000. But please observe the following safety instructions:

**DANGER**

Do not exceed the overall weight of the pedelec because parts important for safety might fracture or fail. If this happens while you are riding the bike, it can lead to severe falls – with fatal consequences \(\Rightarrow VI.I\) Overall weight Page EN-10.

Trailer bikes and trailers alter the riding characteristics. Adapt your riding style accordingly. If you do not adapt your riding style, you could seriously injure or kill yourself or the child in the trailer. The braking distance becomes longer, so you have to start braking earlier, and the steering response becomes more sluggish. Practise starting, braking, going round corners, and up and down hills, starting with an empty trailer bike or trailer.

Only use trailer bikes and trailers that conform to the relevant national regulations. In addition, they should be designed and tested in accordance with DIN EN 15918. Otherwise components could break while you are riding the bike; resulting in serious or even fatal injuries for you and/or your child. Please consult your cycle dealer if you want to purchase a trailer bike or trailer.
4.1.3.1 Safety information

**DANGER**

Attach any luggage securely and regularly check it. If it is not secure, straps etc. can get caught up in the spokes and/or rotating wheels. Serious falls can result.

Do not exceed the overall weight of the pedelec because parts important for safety might fracture or fail. If this happens while you are riding the bike, it can lead to severe falls – with fatal consequences. ⇒ VI.I Overall weight Page EN-10.

Modifying the luggage rack in any way is not permitted. otherwise it may result in the luggage rack fracturing. If this happens while you are riding the bike, you can seriously injure yourself.

The maximum carrying capacity of the luggage rack must not be exceeded, otherwise it may result in the luggage rack fracturing. If this happens while you are riding the bike, you can seriously injure yourself.

Luggage alters the handling characteristics of the bike. Adapt your riding style accordingly. If you do not adapt your riding style, you could seriously injure or kill yourself. The braking distance becomes longer, so you have to start braking earlier, and the steering response becomes more sluggish.

**WARNING**

Make sure that the luggage does not obscure the view of the reflectors and rear lights, and that they are easily visible to other road users. Otherwise there is a risk of not being seen in unfavourable lighting conditions (fog, rain, dusk, darkness), which could result in you being seriously injured.

### 4.1.3 Luggage rack

<table>
<thead>
<tr>
<th>Position</th>
<th>Over the rear wheel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum carrying capacity</td>
<td>25 kg*</td>
</tr>
<tr>
<td>Tested</td>
<td>in accordance with DIN EN 14872</td>
</tr>
</tbody>
</table>

*Check for different specifications on the luggage rack itself or in the luggage rack manufacturer's installation instructions. Otherwise it may result in the luggage rack fracturing. If this happens while you are riding the bike, you can seriously injure yourself. The maximum carrying capacity is specified on the luggage rack carrier or on the mounting of the rear light.
Carry your luggage in side-mounted panniers. Distribute the weight evenly to ensure safer riding characteristics.

The luggage rack on your pedelec is delivered without a flap. One can be fitted later. Please contact your cycle dealer. Visit http://www.racktime.com for more luggage rack accessories.

5. Battery

5.1 Safety information

DANGER

People (including children) who, because of their physical, sensory or intellectual capabilities, or because of their lack of experience or knowledge, are unable to use batteries, are prohibited from using them unless supervised or under the instruction of a responsible person. Otherwise there is a risk of mishandling with consequential very serious injuries.

WARNING

Only operate your pedelec with a suitable original battery. The use of other batteries can cause explosions, serious burns and fires. Further consequences can include malfunctions and a limited battery life. You can find a list of approved batteries in \( \Rightarrow 5.2 \) Technical details Page EN-34.

Only use the correct original battery charger to charge your battery. The use of other battery chargers can cause explosions, serious burns and fires. Further consequences can include malfunctions and a limited battery life. You can find a list of permitted chargers in \( \Rightarrow 7.2 \) Charger Page EN-46.
WARNING

Always remove the battery before starting to work on the pedelec. Accidental activation of the ( ) button can result in severe injuries.

Keep batteries away from sparks and fires. Prevent batteries from heating up too much. They can explode and cause serious burns and fires. Further consequences can include malfunctions and a limited battery life. Keep batteries away from sources of heat (e.g. direct sunlight and radiators). When charging the battery, ensure there is adequate ventilation and observe the permitted ambient temperature range: 0 to +40˚C. Do not extinguish a burning battery with water, only the surrounding burning material. Fire extinguishers with metal fire powder (Class D) are more suitable. If it is possible to take the battery safely outside, smother the fire with sand.

Batteries must not be short-circuited. They can explode and cause serious burns and fires. Further consequences can include malfunctions and a limited battery life. Do not store batteries in a box or drawer where they can be short-circuited by contact with each other or with conductive materials (screws, paper clips, keys, coins, nails or other small metal objects).

Batteries must not be destroyed, shredded, taken apart, opened up or repaired. They can explode and cause serious burns and fires. Contact your cycle dealer for help if you have problems with the battery.

WARNING

Damaged batteries must not be charged, used or transported.
» They can explode and cause serious burns and fires.
» Gases can be released and irritate the airways. Ensure there is a supply of fresh air and consult a doctor in the event of discomfort.
» Liquid can escape and cause skin irritation. Prevent contact with it. In the event of accidental contact, wash off the liquid with water. If the liquid gets into the eyes, flush out with plenty of water and seek medical help.

Do not send batteries by post. Batteries are dangerous goods that under certain conditions may explode, causing severe burns and fires. Only trained personnel may prepare and transport batteries. If you have a complaint about a battery, please always go through your cycle dealer. Dealers are able to have batteries collected free of charge under hazardous goods regulations.
**CAUTION**

**Batteries must not be immersed in water.** This presents a risk of explosion. Do not extinguish a burning battery with water, only the surrounding burning material. Fire extinguishers with metal fire powder (Class D) are more suitable. If it is possible to take the battery safely outside, smother the fire with sand. But you need not be afraid of the battery exploding under you when you ride the cycle through rain. The battery is sealed to prevent moisture and spray water from entering.

**IMPORTANT**

**Only use the battery to operate this pedelec,** otherwise there is a risk of damage to the device.

**CAUTION**

**Batteries must not be immersed in water.** This presents a risk of explosion. Do not extinguish a burning battery with water, only the surrounding burning material. Fire extinguishers with metal fire powder (Class D) are more suitable. If it is possible to take the battery safely outside, smother the fire with sand. But you need not be afraid of the battery exploding under you when you ride the cycle through rain. The battery is sealed to prevent moisture and spray water from entering.

**IMPORTANT**

**Batteries must not be subjected to mechanical impact.** This poses a risk of damage. A battery can still be damaged after a drop or impact even if there are no visible signs of damage. A battery which looks fine on the outside should therefore also be subjected to an inspection. Please contact your cycle dealer.

**Perform a ‘learning cycle’:** A new, **fully charged** battery should be run down once until the motor assist stops and without recharging in between. In that way the battery ‘learns’ its capacity, and the actual capacity will agree with the level indicated on the battery status display. As soon as the battery enters Sleep mode, press the battery button for one second. Then the learn cycle can be continued. Please perform a learn cycle every six months or 5,000 kilometres. When the battery becomes older and you do not repeat the cycle from time to time, the difference between actual battery capacity and charge level display will become greater and greater.

**IMPORTANT**

**Batteries are subject to the dangerous goods regulations.** Private users are permitted to transport them on the road without further conditions. When transported by commercial third parties (such as by air, freight forwarders and logistics firms), special requirements of packaging and labelling must be observed. Please contact your cycle dealer if you have any questions about transportation.
### 5.2 Technical details

<table>
<thead>
<tr>
<th></th>
<th>13 Ah</th>
<th>17.5 Ah</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>13 Ah</td>
<td>17.5 Ah</td>
</tr>
<tr>
<td><strong>Position</strong></td>
<td>Seat tube</td>
<td>Seat tube</td>
</tr>
<tr>
<td><strong>Nominal capacity</strong></td>
<td>13 Ah</td>
<td>17.25 Ah</td>
</tr>
<tr>
<td><strong>Nominal voltage</strong></td>
<td>36 V</td>
<td>36 V</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>474 Wh</td>
<td>621 Wh</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>3100 g</td>
<td>3300 g</td>
</tr>
<tr>
<td><strong>Charge cycles</strong></td>
<td>1,100 full cycles</td>
<td>1,100 full cycles</td>
</tr>
<tr>
<td><strong>Charge time</strong></td>
<td>Approx. 3.5 hours</td>
<td>Approx. 5 hours</td>
</tr>
<tr>
<td><strong>Cell</strong></td>
<td>Li-ion</td>
<td>Li-ion</td>
</tr>
<tr>
<td><strong>Permissible ambient temperature for charging</strong></td>
<td>0 to 40 °C</td>
<td>0 to 40 °C</td>
</tr>
<tr>
<td><strong>Permissible ambient temperature in operation</strong></td>
<td>-10 to +40 °C</td>
<td>-10 to +40 °C</td>
</tr>
<tr>
<td><strong>Storage temperature</strong></td>
<td>-10 to +50 °C</td>
<td>-10 to +50 °C</td>
</tr>
<tr>
<td><strong>Recommended storage temperature</strong></td>
<td>18 to 23 °C</td>
<td>18 to 23 °C</td>
</tr>
</tbody>
</table>

*With a 4 A charger, until battery is fully charged (95% battery capacity).*

### 5.3 Overview and basic functions

- **Discharge plug**
- **Protective cap for power jack**
- **Label**
- **Display panel**

*dependent on model*
5.3.1 Display panel

On the outside of the battery are a button and a display panel with five LEDs. Three LEDs show percentage values. The LEDs light up when you press the battery button. The number lighting up, and how, provides information on the battery.

5.3.1.1 Battery charge level

1. Briefly press the battery button in standby mode.

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
<th>Battery charge level</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>5 LEDs light up</td>
<td>100 – 84%</td>
</tr>
<tr>
<td>50%</td>
<td>4 LEDs light up</td>
<td>83 – 68%</td>
</tr>
<tr>
<td>0%</td>
<td>3 LEDs light up</td>
<td>67 – 51%</td>
</tr>
<tr>
<td>0%</td>
<td>2 LEDs light up</td>
<td>50 – 34%</td>
</tr>
<tr>
<td>0%</td>
<td>1 LED lights up</td>
<td>33 – 17%</td>
</tr>
<tr>
<td>0%</td>
<td>1 LED flashes</td>
<td>17 – 0%</td>
</tr>
</tbody>
</table>

*dependent on model

5.3.1.2 Capacity

Capacity indicates the quantity of electric charge that a battery can deliver or store. It is specified in ampere hours (Ah). Even when used properly, capacity diminishes over time due to chemical reactions (ageing). So it reduces with every charging cycle for example. A battery also ages slightly when it is not used.

A charging cycle is the complete charging of a battery from 0 to 100% capacity. It follows that not every charging process equates to a charging cycle. For example, a charge from 50 to 100% capacity is only half a charging cycle.

1. Press the battery button for five seconds. The maximum available capacity (state of health) of the battery will be displayed.

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
<th>Battery charge level</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>5 LEDs light up</td>
<td>3 – 5 LEDs light up</td>
</tr>
<tr>
<td>&lt; 50%</td>
<td>4 LEDs light up</td>
<td>100 – 84%</td>
</tr>
<tr>
<td></td>
<td>3 LEDs light up</td>
<td>83 – 68%</td>
</tr>
<tr>
<td></td>
<td>2 LEDs light up</td>
<td>67 – 51%</td>
</tr>
<tr>
<td></td>
<td>1 LED lights up</td>
<td>50 – 34%</td>
</tr>
<tr>
<td></td>
<td>1 LED flashes</td>
<td>33 – 17%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17 – 0%</td>
</tr>
</tbody>
</table>

*dependent on model

The battery may need to be replaced when fewer than 3 LEDs light up. Discuss how to proceed with your cycle dealer.
5.3.1.3 Sleep mode

To prevent a total discharge, the battery management system switches the battery to Sleep mode. Your battery reverts to Sleep mode after 10 days (depending on charge level).

To wake from Sleep mode

1. Press the battery button for one second. The following appears:

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✈️  ✈️  ✈️  ✈️  ✈️</td>
<td>The first, second, third, fourth and fifth LEDs come on in order and then all go off.</td>
</tr>
</tbody>
</table>

2. The battery has now “woken up”.

If no LED flashes, or all five LEDs flash several times, the battery may be faulty ⇒ *7.1 Battery Page EN-44*.

Initiating Sleep mode

1. Briefly press the battery button twice. The following appears:

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✈️  ✈️</td>
<td>The first and fifth LEDs flash twice.</td>
</tr>
</tbody>
</table>

2. The battery is now in Sleep mode.

5.3.2 Inserting and locking the battery

**IMPORTANT**

*Grasp the battery firmly,* so that it does not fall out of your hand. It can be damaged if you drop it.

*One-key system:* The same key (if available) can be used for the cycle and battery lock.

1. Hold the battery, with the discharger connector pointing downwards, at an angle of 80°, slightly tilted to the left in front of the docking station.

2. Place the battery catches into the dents provided.

3. Push the battery forwards and upwards into the docking station until the locking mechanism engages.
4. Turn the battery key clockwise. The battery is now locked.

5.4 Tips

5.4.1 Range

Various factors determine how far you can go with your battery:

- When you go on a long trip it is worth taking a spare battery or battery charger with you.

**Ride profile:** You need the most power in the highest ride profile (Dynamic). The range becomes shorter.

- Select the ride profile in line with the routes you ride. For a leisurely tour with friends at the weekend, the “Relax” assist level is the right choice. If you often cycle at greater speed (such as to work), the “Dynamic” setting can inject the necessary pace.

- Vary the assist modes you use. If there is a tailwind when going downhill or on the level, you can still go fast with a lower assist mode.

**Tyre pressure:** If the tyre pressure is too low it is harder for the tyres to rotate. The drive unit needs to provide more assistance and the range decreases.

---

**5.3.3 Unlocking and removing the battery**

1. Grip the battery firmly, put the key into the lock and turn anticlockwise. The battery is unlocked.

2. Grip the battery and tilt it out of the docking station on the side.

---

**IMPORTANT**

- The recommendation is to remove the key now and keep it in a safe place so it does not break off and is not lost.

- Hold the battery tight so it does not fall. It can be damaged if you drop it.
Riding style: A low pedalling speed combined with high gears results in high power consumption.

Change down in good time to maintain constant cadence, especially when starting.

Your fitness level: The fitter you are, the less assistance you will need.

Total weight: The lower the total weight supported by the bike, the easier it will be to ride ⇒ VI.I Overall weight Page EN-10.

Outside temperatures: The lower the outside temperatures (e.g. cold in winter), the shorter the range.

Insert the battery just before starting off with your pedelec. This way you prevent low temperatures shortening the range.

Battery capacity: A much shorter service life after the charging process indicates that the battery has lost considerable capacity. ⇒ 5.3.1.2 Capacity Page EN-35.

The battery may have to be replaced. Discuss how to proceed with your cycle dealer.

Route selected: You need to pedal harder when cycling uphill or against strong head wind. This is registered by the power sensor, which in turn requires the motor to work harder.

5.4.2 Storage

1. Remove the battery from the pedelec.
2. Store the battery in a dry, not excessively warm room. The battery should not be exposed to direct sunshine. The recommended storage temperature range is 18 to 23 °C.

IMPORTANT

The battery should not be stored in a fully charged state. A charge level between 50 and 70% (●●●) is ideal. Since the battery loses charge very slowly, you should recharge it when only one or two LEDs come on, but after six months at the latest.

5.4.3 Cleaning

DANGER

If you wipe the battery avoid touching the contacts, otherwise there is the risk of an electric shock.

WARNING

Remove the battery from the pedelec before cleaning. Unintentionally pressing the button represents a risk of injury.

Outside temperatures: The lower the outside temperatures (e.g. cold in winter), the shorter the range.

Insert the battery just before starting off with your pedelec. This way you prevent low temperatures shortening the range.

Riding style: A low pedalling speed combined with high gears results in high power consumption.

Change down in good time to maintain constant cadence, especially when starting.

Your fitness level: The fitter you are, the less assistance you will need.

Total weight: The lower the total weight supported by the bike, the easier it will be to ride ⇒ VI.I Overall weight Page EN-10.

Outside temperatures: The lower the outside temperatures (e.g. cold in winter), the shorter the range.

Insert the battery just before starting off with your pedelec. This way you prevent low temperatures shortening the range.

Battery capacity: A much shorter service life after the charging process indicates that the battery has lost considerable capacity. ⇒ 5.3.1.2 Capacity Page EN-35.

The battery may have to be replaced. Discuss how to proceed with your cycle dealer.

Route selected: You need to pedal harder when cycling uphill or against strong head wind. This is registered by the power sensor, which in turn requires the motor to work harder.
**CAUTION**

* Batteries must not be immersed in water.* This presents a risk of explosion. Do not extinguish a burning battery with water, only the surrounding burning material. Fire extinguishers with metal fire powder (Class D) are more suitable. If it is possible to take the battery safely outside, smother the fire with sand. But you need not be afraid of the battery exploding under you when you ride the cycle through rain. The battery is sealed to prevent moisture and spray water from entering.

**IMPORTANT**

* Do not spray the battery with a water hose or wash it with a high-pressure cleaner. Damage to the battery may still result even though the components are sealed. Clean the battery with a soft, damp cloth.

* Do not use any cleaners which contain alcohol or solvent, or which scour. No coarse sponges or brushes may be used either. They leave scratches and cause the surface to become matt. Clean the battery with a soft, damp cloth.

* Do not allow dirt to dry out. It is best to clean the battery immediately after your ride.

1. Remove the battery from the pedelec.
2. Clean the casing with a slightly damp, soft cloth.
3. If the battery terminals are dirty, clean them with a dry, soft cloth.

**6. Battery charger**

**6.1 Safety information**

**DANGER**

* Battery chargers are not a toy and must not be used by children under the age of 8 years. Older children must be sufficiently trained on how to use the battery charger. People who, because of their physical, sensory or intellectual capabilities, or because of their lack of experience or knowledge, are unable to use battery chargers, are prohibited from using them unless supervised or under the instruction of a responsible person. Otherwise there is a risk of mishandling with consequential very serious injuries.

**WARNING**

* Only use the correct, original charger to charge the battery.* The use of other battery chargers can cause explosions, serious burns and fires. Further consequences can include malfunctions and a limited battery life. You can find a list of permitted chargers in ☞ 7.2 Charger Page EN-46.

* Only charge the correct, original battery with the charger.* The use of other batteries can cause explosions, serious burns and fires. Further consequences can include malfunctions and a limited battery life. You can find a list of approved batteries in ☞ 5.2 Technical details Page EN-34.
**WARNING**

Check the charger, cable and plug before each use. Do not use the charger if you detect signs of damage. Do not open the charger yourself, and only have it repaired by qualified experts using original spare parts. This poses a risk of fire and explosion. Damaged chargers, cables and plugs also increase the risk of electric shock.

The charger is only intended to be used indoors. Keep the charger away from rain and moisture. Do not use it on a damp surface. If water gets into the charger there is a risk of electric shock. If water has penetrated the casing, unplug the device immediately and have it checked out by your dealer. Condensation might form on the charger when the temperature suddenly changes from cold to warm. When this happens, wait about an hour. This is the time a charger needs to reach the temperature of the warm surroundings. Prevent this happening by storing the charger where it is used.

The charger and battery may not be covered during the charging process. Do not use the charger and battery on materials which can catch fire easily (such as paper and textiles) or within a combustible environment. This also applies when the battery is charged when fitted to the pedelec. In this case, the pedelec must be positioned such that a potential fire cannot spread quickly (exercise caution with carpeted floors). Do not expose the battery and pedelec to direct sunshine above 40 degrees. The charger heat generated during the charge process represents a risk of fire. When the temperature is higher than 85°C, or there is smoke or an unusual smell, immediately unplug the mains connector of the charger from the socket and disconnect the battery from the charger. An overheated battery is damaged and may not be used again. Always stay with the charger when it is in use.

**WARNING**

Keep battery chargers away from sparks and fires. It can explode causing severe burns and fires. Further consequences can include malfunctions and a reduced service life. Ensure there is adequate ventilation for charging.

**IMPORTANT**

The mains voltage must match the supply voltage of the battery charger, otherwise there is a risk of damage to the device. The supply voltage for the charger is specified on the label on the back of the device.

Do not charge batteries for a long period if they are already fully charged or are not being used. Electrical storms, voltage fluctuations and short circuits can damage the battery.

Keep the battery charger clean. If the contacts are dirty, the dirt can burn during charging, leaving burn marks. The charger may need to be replaced in such cases ⇒ 6.4.1 Cleaning Page EN-43.
### 6.2 Technical details

| Battery voltage | AC input voltage | Frequency | Max. DC output voltage | Max. charge current | Dimensions (L | W | H) | Permissible ambient temperature when charging | Storage temperature | Recommended storage temperature | Weight | Protection class |
|-----------------|------------------|-----------|------------------------|--------------------|-------------------|----------------|-----------------------------------------------|-------------------|------------------------|--------|------------------|
| 36 V            | 230 - 240 V      | 50 – 60 Hz| 42 V                  | 4 A                | 206 mm | 94 mm | 61 mm                          | -10 to +50 °C     | 18 to 23 °C              | 753 g  | The charger is only intended to be used indoors. Keep the charger away from rain and moisture. Water penetrating into the charger poses a risk of electric shock. |

### 6.3 Functions

#### 6.3.1 Charging the battery

**DANGER**

*Read and follow the information on the charger specification plate, otherwise there is a risk of misuse resulting in serious injuries.*

*Damaged batteries must not be charged.*

**The battery can remain on the pedelec during the charging process. It can also be removed and charged elsewhere.**

1. Connect the power cable to the battery charger.
2. Fold up the protective cap on the battery.
3. Connect the charging cable to the battery charging socket (it clicks into place).
4. Insert the mains plug into a power socket. The red LED lights red briefly ●, then the green LED flashes at a constant speed ☀.
5. The charger switches off once the battery is fully charged. The green LED on the charger is continually on ●. All five LEDs ●●●●● on the battery light continually. No LED flashes.

If the battery now stays on the charger, the charger regularly checks whether the battery is still fully charged. The charger LED starts to flash again. After checking and ascertaining that the battery is full, the charger switches back to “light continually”.

6. Remove the power cable from the socket after completing the charging process.

7. Remove the charging cable from the battery charging socket.

8. Fold down the protective battery cap.

### 6.3.1.1 Battery display during charging

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
<th>Battery charge level</th>
</tr>
</thead>
<tbody>
<tr>
<td>●●●●●</td>
<td>5 LEDs light up and no LED flashes</td>
<td>100 – 97 %</td>
</tr>
<tr>
<td>●●●●</td>
<td>4 LEDs light up and the 5th LED flashes</td>
<td>80 – 96 %</td>
</tr>
<tr>
<td>●●●</td>
<td>3 LEDs light up and the 4th LED flashes</td>
<td>60 – 79 %</td>
</tr>
<tr>
<td>●●</td>
<td>2 LEDs light up and the 3rd LED flashes</td>
<td>40 – 59 %</td>
</tr>
<tr>
<td>●</td>
<td>1 LED lights up and the 2nd LED flashes</td>
<td>20 – 39 %</td>
</tr>
<tr>
<td>●</td>
<td>1 LED flashes</td>
<td>0 – 19 %</td>
</tr>
</tbody>
</table>
### Tips

#### 6.4.1 Cleaning

**DANGER**

Always unplug the charger from the mains before cleaning and especially before wiping it, otherwise you could get an electric shock if you touch the contacts.

**IMPORTANT**

Do not immerse the charger in water. Damage may still result even though the components are sealed.

Do not use any cleaners which contain alcohol or solvent, or which scour. No coarse sponges or brushes may be used either. They leave scratches and cause the surface to become matt. Clean the charger with a soft damp cloth.

1. Remove the charging cable from the battery charging socket.
2. Unplug the charger from the mains socket.
3. Clean the casing with a slightly damp, soft cloth.
4. If the contacts are dirty, clean them with a soft dry cloth.

#### 6.4.2 Storage

1. Store the battery charger in a dry, not excessively warm room. The charger should not be exposed to direct sunshine. The recommended storage temperature range is 18 to 23 °C.
7. Fault
7.1 Battery

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>⬤ ⬤ ⬤ ⬤ ⬤</td>
<td>5 LEDs flash quickly after the battery button is pressed.</td>
<td>a) Battery is flat and is disabled.</td>
<td>a) If the battery is flat, it will work again briefly after a short recovery period, then switch off again. It must now be charged ⇧ 6.3.1 Charging a battery Page EN-41.</td>
</tr>
<tr>
<td>⬤</td>
<td>The first LED flashes rapidly after pressing the battery button.</td>
<td>There is a charging fault.</td>
<td><strong>Unplug the charger from the mains immediately.</strong> If the problem reoccurs, a new battery charger is required.</td>
</tr>
<tr>
<td></td>
<td>No LEDs light up after pressing the battery button.</td>
<td>The battery is faulty.</td>
<td>Please contact your cycle dealer. The battery must be replaced.</td>
</tr>
<tr>
<td></td>
<td>The range appears too short</td>
<td>a) The range depends on: &lt;br&gt; » Ride profile &lt;br&gt; » Assist mode &lt;br&gt; » Tyre pressure &lt;br&gt; » Riding style &lt;br&gt; » Physical condition &lt;br&gt; » Overall weight &lt;br&gt; » Outside temperatures &lt;br&gt; » Battery capacity &lt;br&gt; » The route selected &lt;br&gt; » Smartphone charging via display</td>
<td>a) The are many reasons why the range may seem low ⇧ 5.4.1 Range Page EN-37.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) A learning cycle has not been carried out.</td>
<td><strong>Perform a ‘learning cycle’:</strong> A new, fully charged battery should be run down once until the motor assist stops and without recharging in between. In that way the battery ‘learns’ its capacity, and the actual capacity will agree with the level indicated on the battery status display. As soon as the battery enters Sleep mode, press the battery button for one second. Then the learn cycle can be continued. Please perform a learn cycle every six months or 5,000 kilometres. If you do not repeat this from time to time, the actual capacity of the battery will increasingly diverge from the value on the battery status display.</td>
</tr>
<tr>
<td>Display</td>
<td>Description</td>
<td>Cause</td>
<td>Remedy</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Battery key lost              | Order another key. We recommend making a note of the key number on the sales receipt/document. This number can be used to order a replacement key. | 1. Go to website www.trelock.de  
2. Select your language.  
3. Select “Your service”, then “Trelock key service”.  
4. Follow the instructions. | If you no longer have the key number, replacing the lock is the only option. Contact your cycle dealer for this. |
| The battery gets hot when being charged. | a) High ambient temperatures  
b) Damaged battery. | a) Stop charging immediately and let the battery cool down. Then resume charging in a cooler environment. If the problem persists, contact your cycle dealer (the battery may need replacing).  
b) Damaged batteries must not be charged or used for any other purpose. Contact your cycle dealer. The battery may have to be replaced. |
| The battery does not charge.  | a) Ambient temperature too high or low.  
b) Damaged battery.  
c) Battery charger faulty. | a) You can charge the battery in ambient temperatures between 0˚C and 40˚C.  
b) Damaged batteries must not be charged or used for any other purpose. Contact your cycle dealer. The battery may have to be replaced.  
c) Have your charger checked out by your cycle dealer; it may have to be replaced. |
| Battery is damaged.           | Accident or fall involving the pedelec or the battery has been dropped.      |                               | Damaged batteries must not be charged or used for any other purpose. Contact your cycle dealer. The battery may have to be replaced. |
| Battery does not “wake up” from Sleep mode. | a) Battery is flat.  
b) Damaged battery. | a) Briefly charge the battery.  
b) Damaged batteries must not be charged or used for any other purpose. Contact your cycle dealer. The battery may have to be replaced. |

Do not switch on the pedelec when you are riding. Otherwise the motor can stop and you will not be provided with the full assist level.
7.2 Charger

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The red LED flashes continuously.</td>
<td>There is a charging fault.</td>
<td><strong>Unplug the charger from the mains immediately.</strong> If the problem reoccurs, a new battery charger is required.</td>
</tr>
</tbody>
</table>

8. Torque settings

**DANGER**

Only use appropriate tools to tighten screws and bolts. Observe the specified torque setting. The component manufacturer's torque settings take precedence (where available). Failure to comply can result in screws/bolts becoming loose, tearing away or fracturing. If that happens while you are riding the bike, components may come off and you could have a severe crash. If screws are overtightened, components can also be damaged. Tighten all screws and bolts that are relevant for safety with a torque wrench. This indicates the corresponding torque in newton metres (Nm).

If no values are shown on the component or component manuals, use the torque settings from the following table.

<table>
<thead>
<tr>
<th>Screw fixing</th>
<th>Thread</th>
<th>Tightening torque (Nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedal</td>
<td>9/16</td>
<td>40</td>
</tr>
<tr>
<td>Front axle nut</td>
<td>General</td>
<td>25 – 30</td>
</tr>
<tr>
<td>Rear axle nut</td>
<td>General</td>
<td>35 – 40</td>
</tr>
<tr>
<td>Ahead stem angle adjustment</td>
<td>M6</td>
<td>8 – 10</td>
</tr>
<tr>
<td>Ahead stem steerer tube</td>
<td>M5 / M6 / M7</td>
<td>M5: 5 / M6: 10 / M7: 14</td>
</tr>
<tr>
<td>Saddle clamp bottom</td>
<td>M5 / M6 / M8</td>
<td>M5: 5 / M6: 10 / M8: 20</td>
</tr>
<tr>
<td>Saddle clamp top</td>
<td>M5 / M6 / M7 / M8</td>
<td>M5: 5.5 / M6: 5.5 / M7: 14 / M8: 20</td>
</tr>
<tr>
<td>Rim brake shoe</td>
<td>M6</td>
<td>10</td>
</tr>
<tr>
<td>Disc brake calliper, Shimano, IS and PM</td>
<td>M6</td>
<td>6 – 8</td>
</tr>
<tr>
<td>Disc brake calliper, AVID, IS and PM</td>
<td>M6</td>
<td>8 – 10</td>
</tr>
<tr>
<td>Disc brake calliper, Magura, IS and PM</td>
<td>M6</td>
<td>6</td>
</tr>
<tr>
<td>Gear lever clamp</td>
<td>M5</td>
<td>5</td>
</tr>
<tr>
<td>Brake lever clamp</td>
<td>M5</td>
<td>Ref. manufacturer's spec.</td>
</tr>
<tr>
<td>Cassette fixing ring</td>
<td>N/A</td>
<td>30 – 40</td>
</tr>
<tr>
<td>Screw-on handlebar plugs</td>
<td>M4 / M5</td>
<td>M4: 3 / M5: 5</td>
</tr>
<tr>
<td>Luggage rack</td>
<td>M5 / M6</td>
<td>M5: 5 – 6 / M6: 8 – 10</td>
</tr>
</tbody>
</table>