HERCULES

IMPORTANT
READ CAREFULLY BEFORE USE
KEEP SAFE FOR LATER REFERENCE

TRANSLATION OF THE ORIGINAL OPERATING INSTRUCTIONS

EN

ELECTRIC BICYCLES

E-Imperial, Montfoort, Futura, Servicebike, NOS, Cargo, Rob Cargo, Rob Fold, Rochefort

Types 18-P-0001, 18-P-0002, 18-P-0003, 18-P-0004, 18-P-0072, 18-P-0006, 18-P-0007, 18-Q-0076, 18-Q-0081, 18-Q-0074,18-Q-0082, 18-Q-0083, 18-Q-0084, 18-Q-0085, 18-Q-0099, 18-Q-0100, 18-Q-0104, 18-R-0006, 18-R-0007, 18-R-0008, 18-R-0009, 18-X-0002 18-X-0004, 18-Y-0001, 18-Y-0004, 18-Y-0007, 18-Y-0009, 18-Y-0011

034-11411 • 1.1 • 19.09.2017

Data sheet

Surname, first name of the purchaser:

Date of purchase:

Model:

Frame number:

Type number:

Unladen weight (kg):

Tyre size:

Recommended tyre pressure (bar)*: front: rear:

Wheel circumference (mm):

Company stamp and signature:

*After a tyre change, refer to the tyre markings for the permitted tyre pressures and make sure that they are observed. The recommended tyre pressure must not be exceeded.

1 Technical data

Bicycle

Transportation temperature	5 °C - 25 °C
Ideal transportation temperature	10 °C - 15 °C
Storage temperature	5 °C - 25 °C
Ideal storage temperature	10 °C - 15 °C
Operation temperature	5 °C - 35 °C
Working environment temperature	15 °C - 25 °C
Charging temperature	10 °C - 30 °C
Power output/system	250 W (0.25 W)
Shut-off speed	25 km/h

Table 1: **Bicycle technical data**

Battery

Transportation temperature	5 °C - 25 °C
Ideal transportation temperature	10 °C - 15 °C
Storage temperature	5 °C - 25 °C
Ideal storage temperature	10 °C - 15 °C
Charging ambient temperature	10 °C - 30 °C

Table 2: **Battery technical data**

Display

Internal lithium ion battery	3.7 V, 240 mAh
Storage temperature	5 °C - 25 °C
Charging ambient temperature	10 °C - 30 °C

Table 3: **Battery technical data**

Emissions

A-weighted emission sound pressure level	< 70 dB(A)
Total vibration level for the hands and arms	< 2.5 m/s²
Highest effective value of weighted acceleration for the entire body	< 0.5 m/s²

Table 4: **Emissions from the bicycle***

***The safety requirements as per Electromagnetic Compatibility Directive 2014/30/EU have been met. The bicycle and the charger can be used in residential areas without restriction.**

USB port

Charge voltage	5 V
Charging current	max. 500 mA

Table 5: **USB port technical data**

Tightening torque

Axle nut tightening torque	35 Nm - 40 Nm
Handlebars clamping screw maximum tightening torque*	5 Nm - 7 Nm

Table 6: **Tightening torque values***

***if there is no other data on the component**

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2 About these instructions

Read these operating instructions before commissioning the bicycle in order to use all the functions correctly and safely. They are not a substitute for personal training by the supplying HERCULES specialist dealer. The operating instructions are a component part of the bicycle. Therefore, if it is re-sold at a later time, they must be handed over to the subsequent owner.

These operating instructions are mainly directed at the rider and user of the cycle. In general, they are technical laypersons.

Text passages which are directed expressly at specialist staff (e.g. bicycle mechanics), are clearly marked with a blue tool symbol.

Staff at all HERCULES specialist dealers have specialist training and qualifications, and are therefore capable of identifying risks and preventing hazards which may arise during maintenance, servicing and repairs on the bicycle. Information for specialist staff does not require technical laypersons to take any action.

2.1 Manufacturer

The manufacturer of the bicycle is:

HERCULES GMBH
Longericher Straße 2
50739 Köln, Germany

Tel.:	+49 4471 18735-0
Fax:	+49 4471 18735-29
E-mail:	info@hercules-bikes.de
Internet:	www.hercules-bikes.de

2.2 Laws, standards and directives

These operating instructions comply with the essential requirements from:

- the Machinery Directive 2006/42/EG,
- EN ISO 12100:2010 Safety of machinery – General principles of design – Risk assessment and reduction,
- EN ISO 4210-2:2015, Cycles – Safety requirements for bicycles – Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles,
- EN 15194:2009+A1:2011 Cycles – Electrically power assisted cycles – EPAC bicycles,
- EN 11243:2016, Cycles – Luggage carriers for bicycles – Requirements and test methods,
- the Electromagnetic Compatibility Directive 2014/30/EU,
- EN 82079-1:2012, Preparation of instructions for use – Structuring, content and presentation – Part 1: General principles and detailed requirements and
- EN ISO 17100:2016-05, Translation Services – Requirements for translation service.

2.3 Other valid documents

These operating instructions are only complete in conjunction with the other valid documents.

The following document applies for this product:

- Charger operating instructions.

No other information is also applicable.

The constantly updated lists of approved accessories and parts are available to HERCULES specialist dealers.

2.4 Subject to change

The information contained in these operating instructions are the approved technical specifications at the time of printing. Any significant changes are included in a new issue of the operating instructions.

2.5 Language

The original operating instructions are written in German. A translation is not valid without the original operating instructions.

2.6 Identifying

2.6.1 Operating instructions

These operating instructions are printed in colour and glued (PUR glue) in an outer cover made of thin paper. HERCULES GMBH assumes no liability for copies of any kind, for example, black and white copies, loose pages or electronic copies.

The identification number of these operating instructions is made up of the document number, the version number and the release date. It can be found on the cover page and in the footer.

Identification number	034-11411_1.1_20.09.2017

Table 7: Identification number of the operating instructions

2.6.2 Bicycle

These HERCULES operating instructions refer to the *model year* 2018. The production period is from July 2017 to June 2018. They are issued in July 2017.

The operating instructions are a component part of the following bicycles:

Type number	*Model*	*Bicycle type*
18-P-0001	E-Imperial 180 S R8	Carrier bicycle
18-P-0002	E-Imperial 180 S R8	Carrier bicycle
18-P-0003	E-Imperial 180 S F8	Carrier bicycle
18-P-0004	E-Imperial 180 S F8	Carrier bicycle
18-P-0005	E-Imperial 180 S 9	Carrier bicycle
18-P-0006	E-Imperial 180 S 9	Carrier bicycle
18-P-0007	E-Imperial 180 S 9	Carrier bicycle
18-Q-0072	Montfoort plus F8	City and trekking bicycle

Table 8: Type number, model and bicycle type categorisation

Type number	*Model*	*Bicycle type*
18-Q-0073	Montfoort F7	City and trekking bicycle
18-Q-0074	Montfoort F7	City and trekking bicycle
18-Q-0076	Montfoort Cruise F7	City and trekking bicycle
18-Q-0081	Futura Compact R8	Folding bicycle
18-Q-0082	Futura Compact F8	Folding bicycle
18-Q-0083	Futura Compact R8	Folding bicycle
18-Q-0084	Futura Compact F8	Folding bicycle
18-Q-0085	Futura Compact 8	Folding bicycle
18-Q-0099	Servicebike-E R8 (ISP)	City and trekking bicycle
18-Q-0100	Servicebike-E F8 (ISP)	City and trekking bicycle
18-Q-0104	Rochefort	City and trekking bicycle
18-R-0006	NOS FS CX COMP	Mountain bike
18-R-0007	NOS FS CX SPORT	Mountain bike
18-R-0008	NOS CX COMP	Mountain bike
18-R-0009	NOS CX SPORT	Mountain bike
18-X-0002	Cargo 1000	Carrier bicycle
18-X-0004	Rob Cargo	Carrier bicycle
18-Y-0001	Rob Fold 8 Carbon	Folding bicycle
18-Y-0004	Rob Fold I-F8	Folding bicycle
18-Y-0007	Rob Fold R8	Folding bicycle
18-Y-0009	Rob Fold F8	Folding bicycle
18-Y-0011	Rob Fold F7	Folding bicycle
18-Y-0012	Rob Fold I-F8 pro (Belt)	Folding bicycle

Table 8: **Type number, model and bicycle type categorisation**

2.7 For your safety

The safety concept of the bicycle comprises four elements:

- the instruction of the rider and/or user, and maintenance and repair of the bicycle by the HERCULES specialist dealer,
- the chapter on general safety,
- the warnings in these instructions and
- the safety marking on the type plates.

2.7.1 Instruction, training and customer service

The HERCULES specialist dealer and supplier provides customer service. Contact details can be found on the back page of these operating instructions and in the data sheet. If you are unable to contact your specialist dealer, you will find further HERCULES specialist dealers on www.hercules-bikes.de. They will also be able to attend to your customer service needs.

The HERCULES specialist dealer commissioned to perform repairs and maintenance work receives regular training.

The rider or the user of the bicycle will be instructed in person on the functions of the bicycle, in particular its electrical functions and correct use of the charger, at the latest when the bicycle is handed over by the supplying HERCULES specialist dealer.

Each rider to whom this bicycle is made available, must receive instruction on the functions of the bicycle. The operating instructions must be submitted to each rider in printed form and must be acknowledged and adhered to.

2.7.2 Basic safety notes

These operating instructions have a chapter with general safety notes [▷ *Chapter 3, page 21*]. The chapter stands out because of its grey background.

2.7.3 Warnings

Hazardous situations and actions are marked with warnings. The warnings in these operating instructions are shown as follows:

SIGNAL WORD	**Type and source of the danger** Description of the danger and the consequences. ▶ Measures

The following pictograms and signal words are used in the operating instructions for warnings and information notices:

	Will lead to serious or even fatal injuries if ignored. High-risk hazard.
	May lead to serious or even fatal injuries if ignored. Medium-risk hazard.
	May lead to minor or moderate injuries. Low-risk hazard.
	May lead to material damage if ignored.

Table 9: **Meanings of the signal words**

2.7.4 Safety markings

The following safety markings are used on the type plates of the bicycle:

	General warning
	Adhere to the instructions for use

Table 10: **Safety markings on the product**

2.8 For your information

2.8.1 Instructions for actions

Instructions for actions are structured in accordance with the following pattern:

✓ Requirements (optional)

▶ Instruction for action

⇨ Result of the action (optional)

2.8.2 Information on the type plate

Alongside the warnings, the type plates of the products also contain other important information on the bicycle:

	only suitable for the road, no off-road riding or jumps
	suitable for roads, off-road riding and jumps of up to 15 cm
	suitable for rough off-road riding and jumps of up to 61 cm
	suitable for rough off-road riding and jumps of up to 122 cm
	suitable for the most difficult terrain

Table 11: **Area of use**

	City and trekking bicycle
	Child's bicycle / bicycle for young adults
	BMX bicycle
	Mountain bike
	Racing bicycle
	Carrier bicycle
	Folding bicycle

Table 12: **Bicycle type**

 	Read the instructions
	Separate collection of electrical and electronic devices
	Separate collection of batteries
	Must not be thrown into fire (burning prohibited)
	Battery must not be opened
	Device of protection class II
	Only suitable for use indoors
	Fuse (device fuse)
	EU conformity
	Recyclable material
	Protect from temperatures above 50 °C and direct sunlight

Table 13: **Information on the type plate**

2.8.3 Language conventions

The bicycle described in these operating instructions may be equipped with alternative components. The equipment of the bicycle is defined by the respective type number. If applicable, the notes *alternative equipment* and *alternative version* make reference to the use of alternative components.

Alternative equipment describes additional components which are not necessarily an integral part of every bicycle in these instructions.

Alternative version explains the various variants of components if they differ in use.

The following terms are used for better legibility:

Term	Meaning
Operating instructions	Original operating instructions or translation of the original operating instructions
Bicycle	Electric motor driven cycle
Motor	Drive motor

Table 14: **Simplified terms**

The following conventions are used in these operating instructions:

Convention	Use
Italics	Entry in the index
SPACED	Displays on the *display screen*
[▷ *Example, page numbering*]	Cross references
•	Bulleted lists

Table 15: **Conventions**

2.9 Type plate

The type plate is situated on the *frame*. The type plate features the following information:

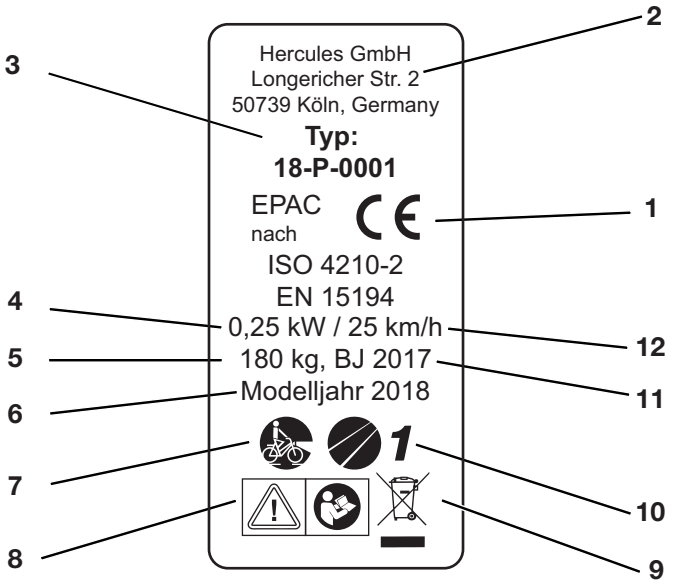


Figure 1: **Type plate, example**

1 CE marking
2 Manufacturer
3 Type number
4 Maximum power output
5 Permitted total weight
6 Model year
7 *Bicycle type*
8 *Safety notes*
9 *Type plate information*
10 *Area of use*
11 Year of manufacture
12 Shut-off speed

3 Safety

3.1 Requirements for the rider

If there are no legal requirements for the rider of electrically power assisted cycles, we recommend that the rider should be a minimum 15 years of age and have experience with muscle-powered bicycles.

The physical and mental abilities of the rider must be sufficient for the use of a muscle-powered bicycle.

If the bicycle is used by minors, as well as thorough instruction to be provided by or in the presence of the legal guardians, supervised use should also be scheduled until there is certainty that the bicycle is being used in accordance with these operating instructions. The legal guardians hold sole responsibility for determining whether minors are suitable to use the bicycle.

3.2 Hazards for vulnerable groups

The battery and the charger must be kept out of the reach of children.

3.3 Proper use

The bicycle must only be used in perfect, fully functional condition. National requirements may apply to the bicycle which differ from the standard equipment. For riding on public roads, some special regulations apply in relation to *running light*, *reflectors* and other components.

The general laws and the regulations for the prevention of accidents and environmental protection in the respective country of use must be adhered to. Proper use also includes all instructions for actions and check lists in these operating instructions. Approved accessories can be installed by specialist staff.

Each bicycle is assigned to a *bicycle type* which determines the proper use

3.3.1 City and trekking bicycle

City and trekking bicycles are designed for daily, comfortable use on asphalted roads and paths. They are suitable for riding on public roads.

City and trekking bicycles are not sports bicycles. If used for sports, reduced riding stability and diminished comfort are to be expected. City and trekking bicycles are not suitable for riding off-road.

3.3.2 Mountain bike

A mountain bike is designed for sporting use on asphalted and non-asphalted paths. The design characteristics thus include a short wheelbase, a sitting position with the rider inclined towards the front, and a brake requiring low actuation force.

The strain on the rider, in particular the hands and wrists, arms, shoulders, neck and back, is accordingly high. Inexperienced riders tend to brake excessively and lose control as a result.

A mountain bike is a piece of sporting equipment. It requires an adaptation period as well as physical fitness. Use requires the appropriate training; in particular riding in bends and braking should be practised.

3.3.3 Cycle for children and young adults

These operating instructions must be read and understood by the legal guardians of minor riders before commissioning.

The content of the operating instructions must be communicated to the riders in an age-appropriate manner.

The cycles for children and young adults are suitable for riding on public roads. The size of the cycle must be checked regularly for orthopaedic reasons. A check must be made at least every three months to make sure that the permitted overall weight is being adhered to.

Cycles for children and young adults are not toys. The sitting position is athletic.

3.3.4 Carrier bicycle

The carrier bicycle is specifically engineered for daily transportation of loads on asphalted public roads.

The transportation of loads requires skill and physical fitness in order to balance the additional weight. The very varied loading conditions and weight distributions require special practice and skill when braking and riding in bends.

The length of the bicycle, the width and the turning circle require a longer period of adaptation. The carrier bicycle requires cautious riding. You must pay attention to the traffic on public roads and the condition of the route accordingly.

The carrier bicycle is not a sports bicycle.

3.3.5 Folding bicycle

A folding bicycle is designed for use on asphalted public roads. A folding bicycle can be folded up and is thus suitable for space-saving transportation, for example on public transport or in a car.

A folding bicycle is not a touring bicycle or a sports bicycle. The folding function of the folding bicycle makes it necessary to use smaller wheels and longer brake cables and Bowden cables. Therefore, in case of an increased load, a reduction in riding stability and braking power, diminished comfort and reduced durability are to be expected.

3.4 Improper use

Failure to adhere to the proper use causes a risk of personal injury and material damage. The bicycle is not suitable for the following uses:

- riding with a damaged or incomplete bicycle,
- riding over steps,
- riding through deep water,
- lending the bicycle to untrained riders,
- carrying further passengers,
- riding with excessive luggage,
- riding with no hands,
- riding on ice and snow,
- improper servicing,
- improper repair,
- demanding areas of use, such as professional competition, and
- stunt riding or acrobatics.

3.5 Personal protective equipment

We recommend that you wear a suitable safety helmet. We also recommend that you wear typical, close-fitting cycling clothing and sturdy footwear.

3.6 Duty of care

The safety of the bicycle can only be assured if all the necessary measures are taken.

3.6.1 User

The user has the duty of care and responsibility for scheduling these measures and checking that they are implemented.

The user:

- makes these operating instructions available to the rider for the duration of use of the bicycle. If necessary, he translates the operating instructions into a language which the rider understands.
- familiarises the rider with the functions of the bicycle before the first ride. Only riders who have received instruction must be allowed to ride the bicycle.
- instructs the rider on proper use and the wearing of personal protective equipment.
- employs specialist staff only for maintenance and repair of the bicycle.

The printed EC declaration of conformity in the appendix is valid as long as the bicycle remains in original condition. As soon as the user makes any relevant modifications or additions, he legally becomes the manufacturer. He must independently guarantee compliance with the EC directives again in order to:

- circulate the bicycle again,
- apply the CE marking and
- avoid compromising occupational safety.

3.6.2 Rider

The rider:

- receives instruction before the first ride. He/she can clarify any questions relating to the operating instructions with the user or the HERCULES specialist dealer.
- wears personal protective equipment.
- assumes all the obligations of the user in case the bicycle changes hands.

4 Description

4.1 Overview

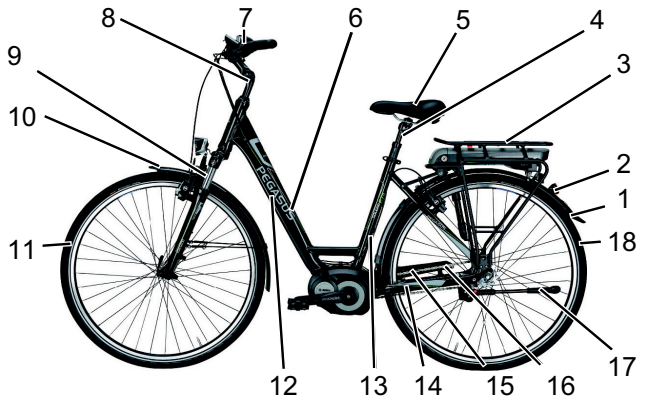


Figure 2: **Bicycle, viewed from the left, example**

1 Rear mudguard
2 Reflector
3 Pannier rack
4 Seat post
5 Saddle
6 Frame
7 *Handlebars*
8 *Stem*
9 Front mudguard
10 *Fork*
11 *Front wheel*
12 *Type plate*
13 *Frame number*
14 Chain stay
15 Chain guard
16 Chain
17 Kickstand
18 *Rear wheel*

4.2 Handlebars

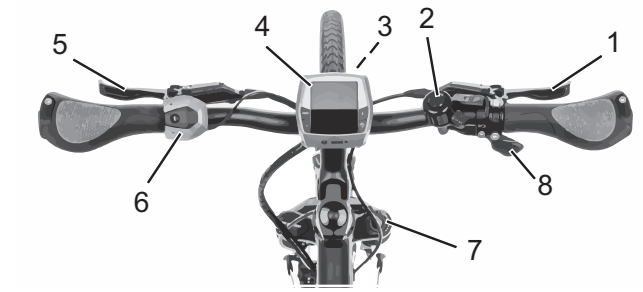


Figure 3: **Detailed view of bicycle from rider position, example of city and trekking bicycle**

1 Front brake lever
2 Bell
3 Lamp
4 Display
5 Front brake lever
6 Command console
7 *Fork lock*
8 *Shifter*

4.3 Wheel and fork

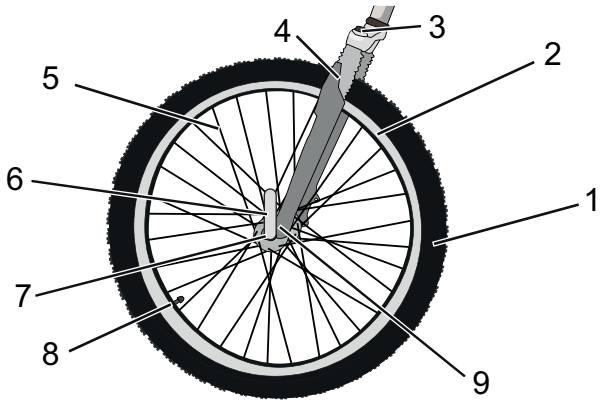


Figure 4: **Components of the wheel, example of front wheel**

1 Tyre
2 Rim
3 Suspension fork head with setting wheel
4 Shock absorber
5 Spoke
6 Quick release
7 Hub
8 *Valve*
9 Fork end of the shock absorber

4.3.1 Valve

Each wheel has a valve. It is used to fill the *tyre* with air. There is a valve cap on each valve. The screw-on valve cap keeps out dust and dirt.

The bicycle either has a classical *Dunlop valve*, a *Presta valve* or a *Schrader valve*.

4.3.2 Suspension

A suspension fork has two functions which improve the floor contact and the comfort: the suspension and the damping.

Figure 5: **Bicycle without suspension (1) and with suspension (2) when riding over an obstacle**

The suspension prevents an impact, e.g. caused by a stone lying in the way, from being directed directly into the rider's body via a fork. Instead, it is absorbed by the suspension system. This causes the suspension fork to compress. The compression can be disabled so that a suspension fork reacts like a rigid fork.

The compressed suspension fork then returns to its original position. The damper decelerates the movement and thus prevents the suspension system from springing back in an uncontrolled manner, and the fork from oscillating up and down.

Dampers which dampen the compressive deflection movements, i.e. the compression load, are called compression dampers or dashpots.

Dampers which dampen the rebound deflection movements, i.e. the rebound load, are called rebound dampers or dashpots.

This model series features up to three different suspension and damping systems:

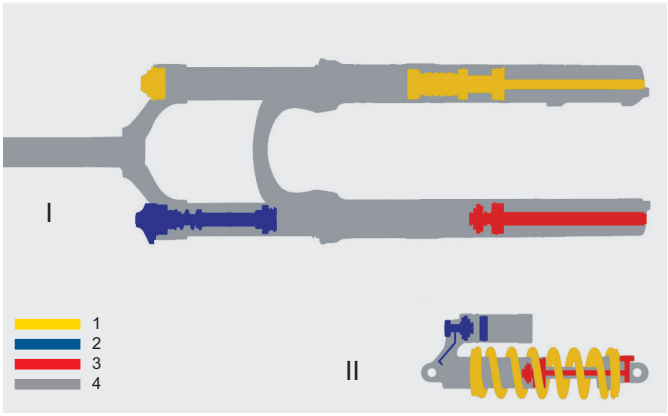


Figure 6: **Arrangement of the suspension systems for the front wheel (I) and rear wheel (II)**

1 Suspension system (steel suspension fork or air suspension fork)
2 Compression damper
3 Rebound damper
4 Fork housing

4.4 Brake system

The bicycle's brake system comprises:

- a rim brake on the front and rear wheels,
- a disk brake on the front and rear wheels or
- a rim brake on the front and rear wheels and an additional back-pedal brake.

4.4.1 Rim brake (Alternative equipment)

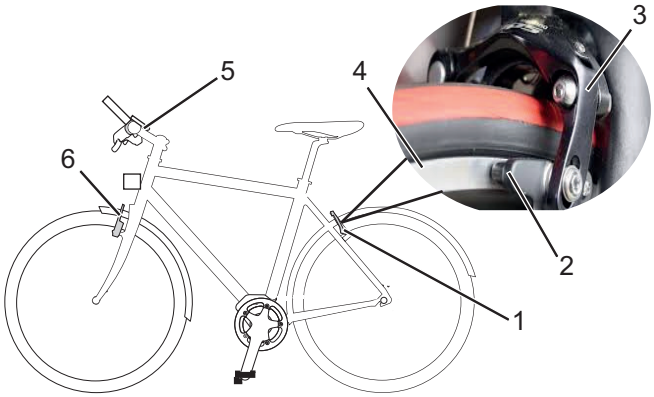


Figure 7: **Components of the rim brake with details, example**

1 Rear wheel brake
2 Brake pad
3 Brake arm
4 *Rim*
5 *Handlebars* with *brake levers*
6 Front wheel brake

The rim brake stops the movement of the wheel when the rider pulls the *brake lever*, causing two brake pads, positioned opposite one another, to be pressed onto the *rims*.

There are two *alternative versions* of the rim brake:

- the hydraulically operated rim brake and
- the cable-operated rim brake.

4.4.1.1 Locking lever (Alternative equipment)

The bicycle with hydraulically operated rim brakes is equipped with a locking lever on both the front wheel brake and the rear wheel brake.

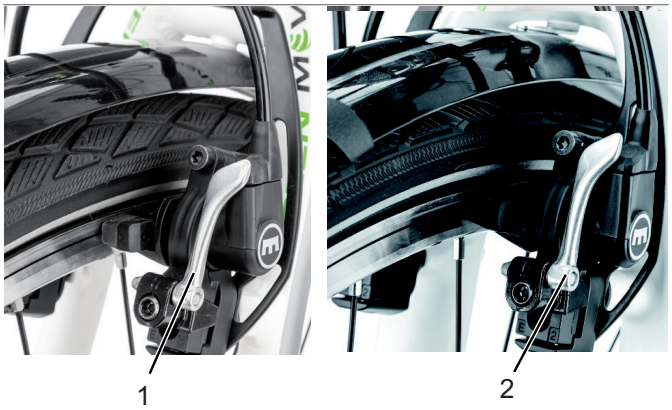


Figure 8: **Rim brake locking lever, on front wheel (1) and rear wheel (2)**

The locking levers are not labelled. The locking levers must only be set by a HERCULES specialist dealer.

4.4.2 Disk brake (Alternative equipment)

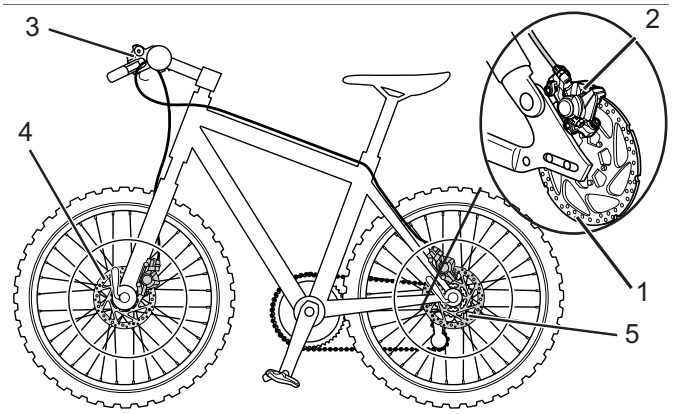


Figure 9: **Bicycle brake system with a disk brake, example**

1 Brake disk
2 Brake caliper with brake linings
3 *Handlebars with brake levers*
4 Front wheel brake disk
5 Rear wheel brake disk

On a bicycle with a disk brake, the brake disk is connected permanently to the *hub* of the wheel. If the brake lever is pulled, the brake linings are pressed against the brake disk, and the movement of the wheel is stopped.

4.4.3 Back-pedal brake (Alternative equipment)

Figure 10: **Brake system with a back-pedal brake, example**

1 Rear wheel rim brake
2 *Handlebars* with *brake levers*
3 Front wheel rim brake
4 *Pedal*
5 Back-pedal brake

The back-pedal brake stops the movement of the rear wheel when the rider pedals in the opposite direction to the direction of travel.

4.5 Electric drive system

The bicycle is driven by muscle power via the chain drive. The force which is applied by pedalling in the direction of travel, drives the front chain wheel. The chain transmits the force onto the rear chain wheel and then onto the rear wheel.

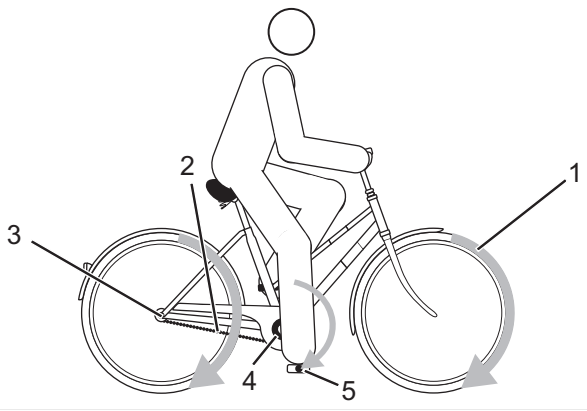


Figure 11: **Diagram of mechanical drive system**

1 Direction of travel
2 Chain
3 Rear chain wheel
4 Front chain wheel
5 Pedal

The bicycle also has an integrated, electric drive system.

The electric drive system is made up of 8 components:

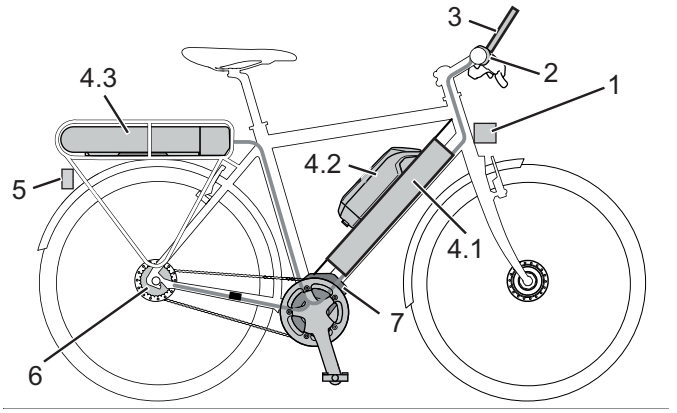


Figure 12: **Diagram of electric drive system**

1 *Lamp*
2 *Display*
3 *Command console*
4.1 *Integrated battery*
4.2 *Down tube battery* and/or
4.3 Pannier rack battery
4 *Display*
5 Rear light
6 *Electric gear shift* (*alternative)*
7 Motor
• a charger which is designed for this battery.

As soon as the required muscle power from the rider pedalling passes a certain level, the motor is activated gently and assists the pedalling motion of the rider. The motor force is determined by the set level of assistance.

The bicycle does not have a separate EMERGENCY STOP or EMERGENCY SHUT-OFF button. The drive system with removable display can be stopped in case of emergency by removing the *display*.

The motor switches off automatically as soon as the rider no longer pedals, the temperature is outside the permitted range, there is an overload or the shut-off speed of 25 km/h has been reached.

A pushing aid can be activated. The pushing aid continues to drive the bicycle as long as the rider pushes the plus button on the *handlebars*. The maximum speed in the process is 6 km/h. The drive stops when the plus button is released.

4.5.1 Battery

The lithium ion battery has an internal electronic protection circuit. It is matched to the charger and the bicycle. The temperature of the battery is monitored constantly. The battery is safeguarded against deep discharge, overcharging, overheating and short circuit. In case of a risk the battery is switched off automatically by a protective circuit. The battery also switches to sleep mode for self-protection when not used for a longer period.

The service life of the battery can be extended if it is well cared for and, above all, stored at the correct temperatures. Even if the battery is cared for properly, the charge status of the battery reduces as it ages. If the operating time is severely shortened after charging, this is a sign that the battery is spent.

Transportation temperature	5 °C - 25 °C
Ideal transportation temperature	10 °C - 15 °C
Storage temperature	5 °C - 25 °C
Ideal storage temperature	10 °C - 15 °C
Charging ambient temperature	10 °C - 30 °C

Table 16: **Battery technical data**

The bicycle has a down tube battery, a pannier rack battery or an integrated battery.

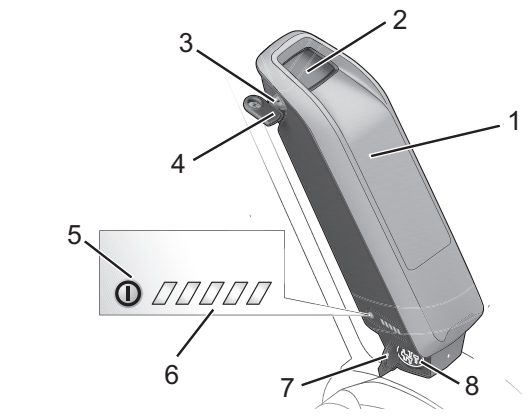


Figure 13: **Details of the down tube battery**

1 Battery housing
2 Battery lock
3 Key for the battery lock
4 Battery lock cover
5 On-Off button (battery)
6 Operating and charge status indicator
7 Charging port cover
8 Port for charger plug

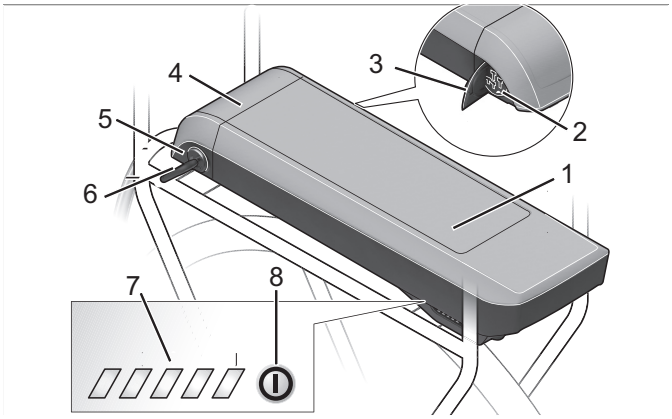


Figure 14: **Details of pannier rack battery**

1 Battery housing
2 Charging port for charger plug
3 Charging port cover
4 Pannier rack battery mount
5 Battery lock
6 Key for battery lock
7 *Operating and charge status indicator*
8 On-Off button (battery)

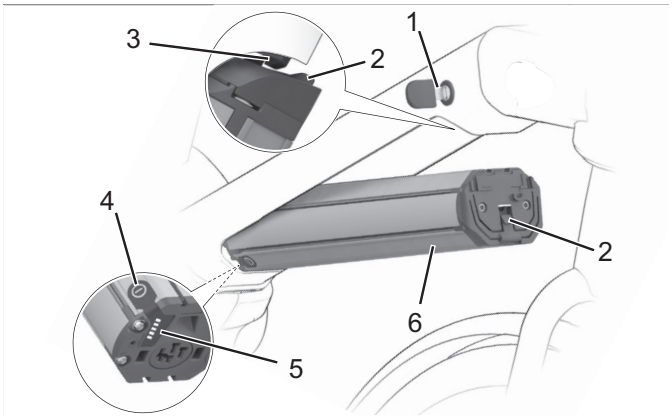


Figure 15: **Integrated battery details**

1 Key for battery lock
2 Retainer guard
3 Securing hook
4 On-Off button (battery)
5 *Operating and charge status indicator*
6 Integrated battery housing

4.5.1.1 Operating and charge status indicator

The five green LEDs of the operating and charge status indicator indicate the charge status of the battery when the battery is switched on. Each LED represents 20% of the charge status. The charge status of the activated battery is also shown on the *display*.

If the charge status of the battery is below 5%, all the LEDs of the operating and charge status indicator go out. However, the charge status is still shown on the *display*.

4.5.2 Running light

When the running light is activated, the *lamp* and the rear light are switched on together.

4.5.3 Display

The display controls the drive system with four operating controls and displays the journey data. The rider can switch off the drive system by removing the display.

The bicycle's battery supplies the display with energy when the display is inserted in the mount, a sufficiently charged battery is inserted on the bicycle, and the drive system is switched on.

If the rider removes the display from the mount, the display draws its energy from the internal, rechargeable battery.

Internal lithium ion battery	3.7 V, 240 mAh
Storage temperature	5 °C - 25 °C
Charging ambient temperature	10 °C - 30 °C

Table 17: **Technical data, display battery**

4.5.3.1 Operative elements

The *display* has four buttons and a USB port.

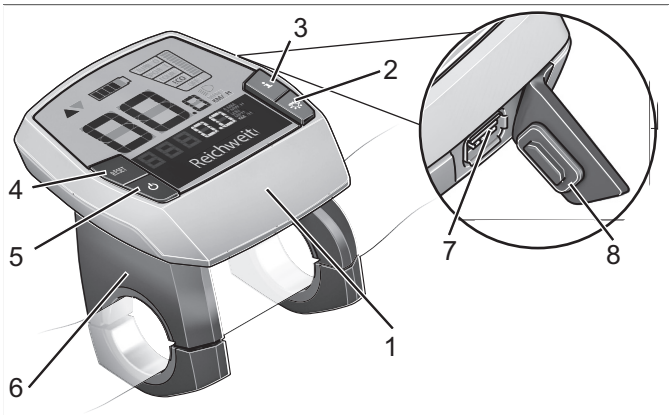


Figure 16: **Overview of the structure of the display's operating controls**

	Symbol	Use
1		Display housing
2	☼	Running light button
3	i	Info button (display)
4	*RESET*	RESET button
5	⏻	On-Off button (display)
6		Display mount
7		USB port
8		USB port protective flap

Table 18: **Operating control overview**

4.5.3.2 USB port

There is a USB port underneath the rubber cover on the right-hand edge of the *display*.

Charge voltage	5 V
Charging current	max. 500 mA

Table 19: USB port technical data

4.5.3.3 Displays

The *display* has seven screen displays:

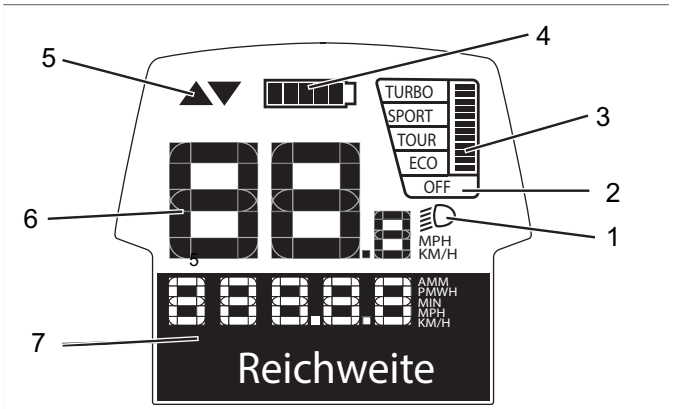


Figure 17: Overview of the screen displays

	Use
1	Running light symbol
2	Level of assistance
3	Motor power used
4	Battery charge status
5	Gear recommendation
6	Current speed
7	Function display

Table 20: Overview of the screen display

Level of assistance

The higher the level for assistance, the more the drive system assists the rider when pedalling. The following levels of assistance are available.

Level of assistance	Use
OFF	When the drive system is switched on, the motor assistance is switched off. The pushing aid cannot be activated with this level of assistance.
ECO	Low assistance
TOUR	Normal assistance
SPORT	Powerful assistance
TURBO	Maximum assistance

Table 21: **Overview of levels of assistance**

Gear recommendation

The gear recommendation function reacts to excessively slow or excessively quick pedalling and recommends a change of gear.

✓ The gear recommendation function has to be switched on in the system settings.

Symbol	Use
▲	Pedalling frequency is too high, a higher gear is recommended
▼	Pedalling frequency is too low, a lower gear is recommended

Table 22: **Symbols of the gear recommendation function**

Current speed

In the system settings, you can select whether the speed is displayed in kilometres or miles.

Function display

The function display shows three different items of information:

- Journey information,
- System settings and data, and
- System messages.

Journey information

Depending on the type of bicycle, the function display may show up to seven items of journey information. The displayed journey information can be switched.

Display	Function
CLOCK	Current time
MAX SPEED	Maximum speed reached since the last RESET
AVG SPEED	Average speed reached since the last RESET
TRIP TIME	Journey time since last RESET
RANGE	Anticipated range of the available battery charge
ODOMETER	Display of the total distance travelled (cannot be changed)
NUVINCI CADENCE	Select automated gear shift
TRIP DISTANCE	Distance travelled since the last RESET

Table 23: **Journey information**

System settings and data

In order to see the system settings and data, the rider has to call up the system settings. The rider can change the values of the system settings, but not the system data.

Display	Function
- CLOCK +	Changes the time
- WHEEL CIRCUM +	Value of the wheel circumference in mm
- ENGLISH +	Changes the language
- UNIT KM/H +	Selects whether the speed and distance are displayed in kilometres or miles
- TIME FORMAT +	Selects whether the time is displayed in 12-hour clock or 24-hour clock format
- SHIFT RECOM. OFF +	Switches the gear recommendation on and off

Table 24: **Changeable system settings**

Display	Function
POWER ON HOURS	Display of the total journey duration
DISPL. VX.X.X.X	Display software version
DU VX.X.X.X	Drive system software version
DU# XXXX XXXXX	Drive system serial number
SERVICE MM/YYYY	(Alternative) defined inspection date
SERV. XX KM/MI	(Alternative) defined inspection
BAT. VX.X.X.X	Battery software version
1.BAT VX.X.X.X	Battery software version
2.BAT VX.X.X.X	Battery software version

Table 25: **System data, not changeable**

System message

The drive system monitors itself continuously and if a fault is detected, it is indicated by a system message. The system may switch off automatically depending on the type of fault. There is a table with all the system messages at the end of the chapter *Maintenance*.

4.5.4 Command console

The command console has four buttons.

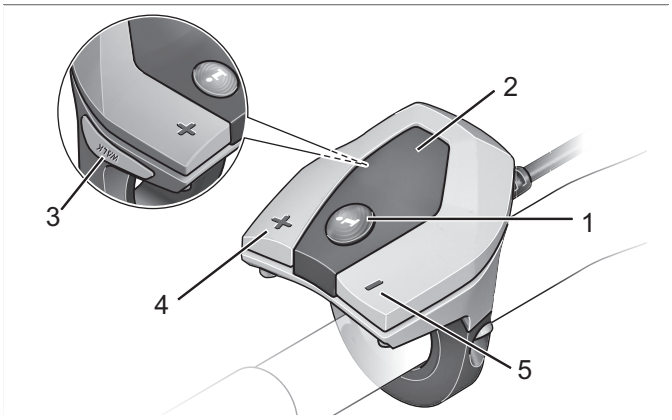


Figure 18: **Overview of the command console**

	Symbol	Surname
1	i	Info button (command console)
2		Command console
3	WALK	Pushing aid button
4	+	Plus button
5	–	Minus button

Table 26: **Overview of the command console**

5 Transportation, storage and assembly

5.1 Transportation

CAUTION

Crash caused by unintentional activation

There is a risk of injury if the drive system is activated unintentionally.

▶ Remove the battery before the bicycle is transported.

CAUTION

Risk of fire and explosion due to high temperatures

Excessively high temperatures damage the batteries. The batteries may self-ignite and explode.

▶ Never expose the battery to sustained direct sunlight.

NOTICE

If the bicycle is lying flat, oil and grease may leak from the bicycle.

If the shipping carton with a bicycle is lying flat or on one end, it does not provide sufficient protection from damage to the *frame* and the wheels.

▶ Only transport the bicycle in an upright position.

NOTICE

Bicycle rack systems which secure the bicycle standing on its head by the *handlebars* or *frame*, generate inadmissible forces on the components during transportation. This can cause the supporting parts to break.

▶ Never use bicycle rack systems which secure the bicycle standing on its head by the *handlebars* or *frame*.

- ▶ Take into account the weight of the roadworthy bicycle when transporting it.
- ▶ Remove the *display* and the battery before transportation of the bicycle.
- ▶ Protect the electrical components and connections on the bicycle from the elements with suitable protective covers.
- ▶ Remove accessories, for example drinking bottles, before transportation of the bicycle.
- ▶ When transporting by car, you must use a suitable bicycle rack system.

The HERCULES specialist dealer will advise you on how to select a suitable rack system properly and how to use it safely.

- ▶ Transport the bicycle in a dry, clean place which is protected from direct sunlight.

For shipping the bicycle, we recommend that you have the bicycle partially dismantled in the proper manner and packaged by the HERCULES specialist dealer.

5.2 Storing

CAUTION

Risk of fire and explosion due to high temperatures

Excessively high temperatures damage the battery. The battery may self-ignite and explode.

▶ Never expose the battery to sustained direct sunlight.

NOTICE

If the bicycle is lying flat, oil and grease may leak from the bicycle.

If the shipping carton with a bicycle is lying flat or on one end, it does not provide sufficient protection from damage to the *frame* and the wheels.

▶ Only store the bicycle in an upright position.

✓ Store the bicycle, battery and charger in a dry and clean place.

Storage temperature	5 °C - 25 °C
Ideal storage temperature	10 °C - 15 °C

Table 27: **Storage temperature for the battery, the bicycle and the charger**

5.2.1 Break in operation

NOTICE

The battery discharges when it is not used. This can cause damage to the battery.

▶ The battery has to be recharged every 8 weeks.

NOTICE

The battery may become damaged if it is connected permanently to the charger.

▶ Do not connect the battery to the charger permanently.

NOTICE

The internal battery in the display discharges when it is not used. This can cause it to be irreparably damaged.

▶ Charge the internal battery in the display every 3 months for at least 1 hour.

If the bicycle is to be removed from service for longer than four weeks, e.g. in winter, a break in operation has to be prepared.

5.2.1.1 Preparing a break in operation

✓ Remove the battery from the bicycle.

✓ Charge the battery to around 60% (three to four LEDs of the charge status indicator light up).

✓ The bicycle has to be cleaned with a damp cloth and preserved with wax spray. Never wax the friction surfaces of the brake.

✓ Before longer periods without use, it is recommendable for the HERCULES specialist dealer to carry out servicing, basic cleaning and apply preservative agent.

5.2.1.2 Carrying out break in operation

▶ Store the bicycle, battery and charger in a dry and clean environment.

▶ Charge the internal battery in the display every 3 months for at least 1 hour.

▶ Check the charge status of the battery after 8 weeks. If only one LED of the charge status indicator lights up, recharge the battery to around 60%.

5.3 Assembly

CAUTION

Crushing caused by unintentional activation

There is a risk of injury if the drive system is activated unintentionally.

▶ Remove the battery if the battery is not absolutely necessary for assembly.

✓ Assemble the bicycle in a clean and dry environment.

✓ The working environment should have a temperature of 15 °C - 25 °C.

Working environment temperature	15 °C - 25 °C

✓ If a fitting stand is used, it must be approved for a maximum weight of 30 kg.

✓ To reduce the weight, we recommend that you always disconnect the battery from the bicycle for the duration of use of the fitting stand.

✓ Universal tools, a torque spanner with an operating range of 5 Nm to 40 Nm and the special tools, as recommended by HERCULES GMBH, must be available.

5.3.1 Unpacking

CAUTION

Hand injuries caused by cardboard packaging

The shipping carton is closed with metal staples. There is a risk of puncture wounds and cuts when unpacking and crushing the packaging.

▶ Wear suitable hand protection.

▶ Remove the metal staples with pliers before the shipping carton is opened.

The packaging material consists mainly of cardboard and plastic film.

▶ The packaging has to be disposed of in accordance with the regulations of the authorities.

5.3.2 Scope of delivery

The bicycle was completely assembled in the factory for test purposes and then dismantled for transportation.

The scope of delivery includes:

- the bicycle, 98% pre-assembled,
- the front wheel,
- the battery or batteries,
- the charger,
- the pedals,
- the operating instructions.

5.3.3 Commissioning

CAUTION

Fire and explosion caused by incorrect charger

Batteries which are charged with an unsuitable charger, may become internally damaged. This may result in fire or an explosion.

▶ Only ever use the battery with the supplied charger.

▶ To prevent mix-ups, mark the supplied charger and these operating instructions clearly, for example with the *frame number* or *type number* of the bicycle.

Given that initial commissioning of the bicycle requires special tools and specialist knowledge, it must be performed by trained specialist staff only.

Experience has shown that a bicycle which has not yet been sold, is spontaneously handed to consumers as soon as it appears ready to ride.

▶ Every bicycle must be prepared so that it is in fully usable condition immediately after being set up.

Initial commissioning includes the following work:

▶ Check the battery [▷ *Chapter 5.3.3.1, page 57*].

▶ The battery is supplied partially charged. In order to guarantee full power, charge the battery fully.

▶ *Install the wheels with quick release* and the *pedals*.

▶ Move the *handlebars* and *saddle* into the functional position.

▶ Check all the components to make sure that they are firmly in place.

▶ Check all the settings and the tightening torque of the axle nuts.

Axle nut tightening torque	35 Nm - 40 Nm

▶ Check the entire cable harness to make sure that it is routed properly:

- You must prevent the cable harness from coming into contact with moving parts.
- The cable routes must be smooth and free from sharp edges.
- Moving parts must not apply any pressure or tension to the cable harness.

▶ Set the *lamp*.

- ▶ Check the drive system, the light equipment and the brakes to make sure that they are fully functional and effective.
- ▶ Set the drive system has to the national language and the appropriate system of measurement.
- ▶ Check the software version of the drive system and update it as necessary.

Sale of the bicycle

- ▶ Fill out the data sheet on the first page of the operating instructions.
- ▶ Adjust the bicycle to the rider.
- ▶ Set the *kickstand* and the *shifter*, and show the purchaser the settings.
- ▶ Instruct the user or rider how to use all the functions of the bicycle.

5.3.3.1 Checking the battery

The battery has to be checked before it is charged for the first time.

- ▶ Press the *On-Off button (battery)*.
- ⇨ If none of the LEDs on the operating and charge status indicator light up, the battery may be damaged.
- ⇨ If at least one of the LEDs of the operating and charge status indicator lights up, but not all of them, the battery can be charged.

5.3.4 Installing the wheels with quick release

CAUTION

Crash caused by unfastened quick release

A faulty or incorrectly installed quick release may become caught in the brake disk and block the wheel. This will cause a crash.

- ▶ Install the front wheel quick release lever on the opposite side to the brake disk.

CAUTION

Crash caused by faulty or incorrectly installed quick release

The brake disk becomes very hot during operation. Parts of the quick release may become damaged as a result. The quick release comes loose. This will result in a crash and injuries.

- ▶ The front wheel quick release lever and the brake disk must be situated on opposite sides.

CAUTION

Crash caused by incorrectly set clamping force

Excessively high clamping force will damage the quick release and cause it to lose its function.

Insufficient clamping force will cause a detrimental transmission of force. The suspension fork or the frame may break. This will result in a crash and injuries.

- ▶ Never fasten a quick release using a tool (e.g. hammer or pliers).
- ▶ Only use the clamping lever with the specified set clamping force.

- ▶ Open the clamping lever.
- ▶ Insert the hub in the fork end of the fork so that it rests fully in place.
- ▶ Push the opened clamping lever with the wheel axle from the right-hand side through the hub.
- ▶ Clamp the wheel and set the clamping force, depending on the version.

6 Adjusting the bicycle to the rider

The HERCULES specialist dealer checks all the factory settings and, when the bicycle is sold, adapts the settings of the *saddle*, *handlebars*, *suspension fork* and the *spring damper elements* to the rider.

6.1 Adjusting the saddle

6.1.1 Determining the seat height

CAUTION

Crash caused by an excessively high seat post setting

A *seat post* with is set too high will cause the *seat post* or the *frame* to break. This will result in a crash and injuries.

▶ Do not pull the seat post out of the frame beyond the minimum insertion depth marking.

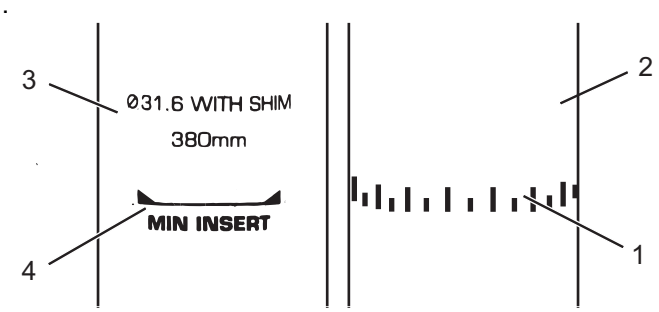


Figure 19: **Detailed view of the seat post, examples of the minimum insertion depth marking**

1 III marking for minimum insertion depth
2 Seat post I
3 Seat post II
4 MIN marking for minimum insertion depth

From an ergonomic point of view, the seat height should be set so that the heel touches the lowest point of the pedal when the leg is outstretched.

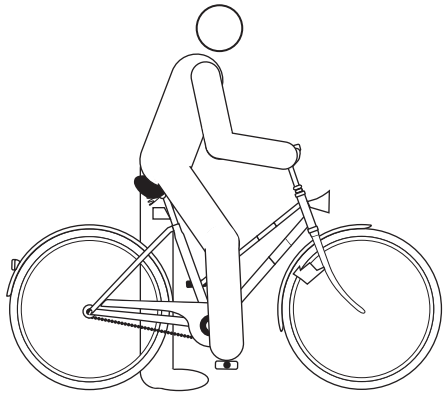


Figure 20: **Determining the saddle height**

6.1.2 Clamp the seat post with the quick release

The HERCULES specialist dealer demonstrates the function of the quick release to the rider or user.

Figure 21: **Seat post quick release in the final position**

1 Seat post clamping lever
2 Seat post
3 Knurled nut

Clamping

✓ Only clamp the *seat post* when the bicycle is stationary.

The *seat post clamping lever* is not marked with any lettering. You can tell whether it is open or closed from its shape.

- To close it, push the *seat post clamping lever* as far as it will go into the *seat post*.
- To open it, pull the *seat post clamping lever* away from the *seat post*.

▶ Check the *clamping force of the quick releases*.

6.1.3 Using the seat post with adapter piece (alternative equipment)

An adapter piece is used to connect a carbon seat post with an oval cross section to the frame.

▶ Open the seat post clamping lever.

▶ To set the ideal saddle height, push the seat post into the frame to the desired saddle height.

▶ Pull the seat post back out of the frame by the length of the adapter piece. Place the adapter piece on the seat post from the rear. Then push the seat post and the adapter piece into the frame together.

▶ Close the seat post clamping lever.

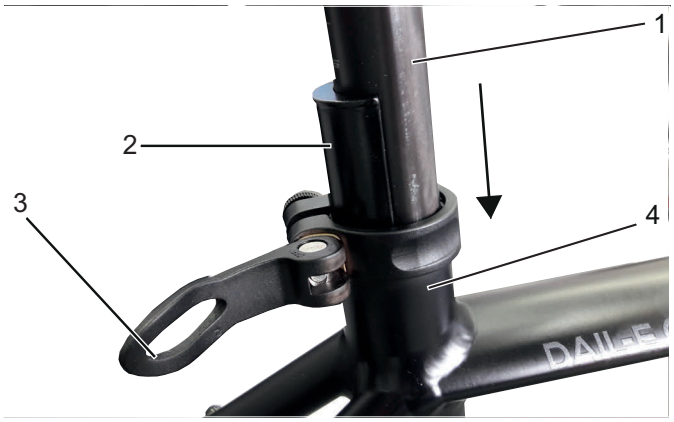


Figure 22: **Connecting the frame with carbon seat post and adapter piece**

1 Seat post
2 Adapter piece
3 Clamping lever
4 Frame

6.1.4 Adjusting the sitting position and saddle tilt

Special tools are required to adjust the seat length and the saddle tilt. The HERCULES specialist dealer adjusts the saddle setting to the rider.

6.2 Setting the handlebars

✓ The handlebars setting must only be made while the bicycle is stationary.

▶ Unfasten and adjust the designated screw connections, and clamp them with the maximum tightening torque for the clamping screws of the handlebars.

Maximum tightening torque for the clamping screws of the handlebars*	5 Nm - 7 Nm

***if there is no other data on the component**

Table 28: **Handlebars clamping screw maximum tightening torque**

6.3 Adjusting the stem

6.3.1 With quick release, version I (Alternative version)

CAUTION

Crash caused by incorrectly set clamping force

Excessively high clamping force will damage the quick release and cause it to lose its function.

Insufficient clamping force will cause a detrimental transmission of force. This can cause components to break. This will result in a crash and injuries.

- ▶ Never fasten a quick release using a tool (e.g. hammer or pliers).
- ▶ Only use the clamping lever with the specified set clamping force.

- ▶ Open the clamping lever for the quick release on the stem.
- ▶ Pull the locking lever on the stem up, and simultaneously pivot the handlebars into the desired position.
- ⇨ You feel the locking lever click into place.
- ▶ Pull out the handlebars to the required height.
- ▶ Lock the quick release.
- ▶ Check the clamping force of the quick releases.

Figure 23: **Closed clamping lever (2) with knurled nut (3) and locking lever (1) on the stem**

6.3.2 With quick release, version II (Alternative version)

CAUTION

Crash caused by incorrectly set clamping force

Excessively high clamping force will damage the quick release and cause it to lose its function.

Insufficient clamping force will cause a detrimental transmission of force. This will result in a crash and injuries.

- ▶ Never fasten a quick release using a tool (e.g. hammer or pliers).
- ▶ Only use the clamping lever with the specified set clamping force.

- ▶ Open the clamping lever for the quick release on the stem.
- ▶ Pivot the handlebars into the desired position.
- ⇨ The handlebars click into place with an audible noise.
- ▶ Lock the quick release.
- ▶ Check the clamping force of the quick releases.

Figure 24: **Stem, version II with clamping lever (1), unlocking knob (2) and knurled nut (3)**

6.4 Checking the clamping force of the quick releases

▶ Open and close the quick releases on the stem or the seat post.

⇨ The clamping force is sufficient if the clamping lever can be moved easily from the open final position into the middle and has to be pressed with the fingers or base of the thumb from the middle point onwards.

Setting the clamping force

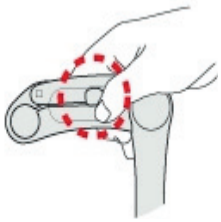
▶ If the *clamping lever on the handlebars* cannot be moved into its final position, screw out the *knurled nut*.

▶ If the clamping force of the *clamping lever on the seat post* is not sufficient, screw in the *knurled nut*.

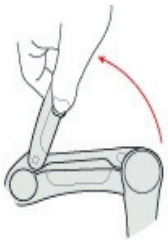
If the clamping force cannot be set, the HERCULES specialist dealer will need to check the quick release.

6.4.1 Adjustable without tools (Alternative version)

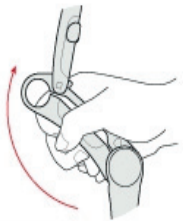
✓ The setting for the *stem which can be adjusted without tools* must only be made when the bicycle is stationary.



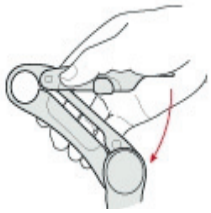
▶ Press the *locking button* on the left-hand side of the *stem*.



▶ Hold the *locking button* and pull the *stem clamping lever* upwards.



▶ Adjust the *stem* individually in the open position.



▶ Once the *stem* has been adjusted, push the *stem clamping lever* down and lock it.

Figure 25: **Steps for adjusting the stem without tools**

⇨ An audible clicking noise signals that the *stem clamping lever* has been locked in the final position. The locked *stem clamping lever* can no longer be raised.

6.5 Basic setting for suspension and damping

The adjustment shown here represents a basic setting. The rider should change the basic setting to suit the surface and his/her preferences.

▶ It is recommendable to make a note of the basic setting. This way, it can be used as the starting point for subsequent, optimised settings and to safeguard against unintentional changes.

6.5.1 Adjusting the hardness of the spring elements

6.5.1.1 Adjusting the hardness of the steel suspension fork

✓ Only make the steel suspension fork setting with the bicycle stationary.

▶ The setting wheel may be located under a plastic cover on the head of the left-hand shock absorber. Remove the plastic cover by pulling it off upwards.

Figure 26: **Suspension fork setting wheel, example**

▶ Use the *setting wheel* on the left-hand *suspension fork head* to adjust the hardness of the steel suspension fork. Adjust the hardness of the steel suspension fork by turning the *setting wheel* in the plus or minus direction.

⇨ The ideal setting in relation to the weight of the rider has been achieved when the shock absorber deflects 3 mm under the stationary load of the rider.

▶ If applicable, re-attach the plastic cover after setting the suspension fork.

6.5.1.2 Adjusting the hardness of the air suspension elements

NOTICE

Riding without filling pressure will destroy the wheel suspension, the frame and the air suspension elements.

▶ Never ride without filling pressure in the air suspension elements.

NOTICE

A normal air pump cannot build up the required pressure with sufficient sensitivity.

▶ Use a special damper pump to adjust the filling pressure.

6.5.1.3 Front wheel

✓ Only make the air suspension fork setting with the bicycle stationary.

▶ The fork valve is located underneath a screw cover on the head of the left-hand fork tube. Unscrew and remove the screw cover.

Figure 27: **Fork valve, example**

▶ Set the filling pressure using the filling pressure recommendations on the air suspension fork as the initial value.

▶ Set the O-rings on the stanchion or the piston to the minimum possible deflection.

▶ Sit on the bicycle and dismount again.

▶ Read the position of the displaced O-ring.

⇨ The ideal setting for the weight of the rider has been achieved when the measured position is between 20 - 30%.

▶ For fine setting, adjust the filling pressure using the fork valve.

▶ Screw the screw cover back on.

Rear wheel

▶ Unscrew the valve cap from the rear wheel damper valve.

▶ Push the O-ring on the dial directly onto the housing of the suspension damping element.

▶ Sit on the bicycle and dismount again.

▶ Read the position of the displaced O-ring.

⇨ The ideal setting for the weight of the rider has been achieved when the measured position is between 20 - 30%.

▶ If the setting is incorrect, adjust the filling pressure using the suspension damping element valve:

- If the pressure is too high, let out air
- If the pressure is too high, carefully pump up the suspension damping element.

▶ Screw the valve cap back on.

Figure 28: **Setting the hardness on the suspension damping element**

1 Dial
2 Valve cap on suspension damping element
3 O-ring

6.5.2 Setting the rebound damper

Front wheel

▶ The rebound damper for the front wheel is situated on the fork leg. It may be marked with either hare/ tortoise symbols or plus and minus symbols.

Figure 29: **Setting the rebound damper, example with hare and tortoise symbol**

1 Setting bolt
2 Tortoise symbol
3 Suspension fork
4 Hare symbol

▶ Open the rebound damper completely. To do so, turn the setting bolt all the way towards the hare symbol or the minus symbol.

▶ Stand next to the bicycle. Deflect the fork as far as possible by pushing down the handlebars.

▶ Release the handlebars abruptly.

⇨ The ideal setting for the rebound damper has been achieved when the wheel maintains contact with the floor when springing back.

▶ If the wheel loses contact with the floor, turn back in small steps towards the tortoise symbol or plus symbol.

Rear wheel

The rebound damper for the rear wheel is situated on the suspension damping element.

Figure 30: **Setting the hardness on the suspension damping element**

1 Setting wheel
2 Hare symbol
3 Tortoise symbol

▶ Set the setting wheel to the middle position between the hare and the tortoise symbols.

▶ Ride over a small obstacle with the bicycle.

⇨ The ideal setting for the rebound damper has been achieved when the rebound movement of the rear wheel feels comparable to that of the front wheel.

▶ If the rear wheel springs much quicker or slower than the front wheel, change the setting by turning the setting wheel.

6.5.3 Setting the compression damper

The basic setting only has to be determined for compression dampers which have to be set with multiple clicks. A setting of 5 clicks is recommended as the basic setting.

Response of the damper	Setting
sensitive	select opened damping or low pressure level
soft or delayed	moderately closed pressure level

Table 29: **Setting the compression damper**

▶ Set the ideal basic setting using the locking lever.

Figure 31: **Compression damper with locking lever (1), example**

6.6 Setting the grip distance of the brake lever (Alternative version)

6.6.1 Hydraulically operated rim brake (Alternative equipment)

CAUTION

Crash caused by incorrectly set grip distance

If brake cylinders are set incorrectly or installed wrongly, the braking power may be lost at any time. This may result in a crash and injuries.

- ▶ Once the grip distance has been set, check the position of the brake cylinder and adjust it as necessary.
- ▶ Never adjust the position of the brake cylinder without special tools. Have a HERCULES specialist dealer carry out the adjustment.

- ▶ Set the slider to one of the three positions with the brake lever gently applied.
- ⇨ The rider can use the brake lever comfortably.

Figure 32: **Brake lever with slider (1) and its three positions (2)**

6.6.2 Hydraulically operated disk brake (Alternative equipment)

▶ Set the grip distance using the knurled screw on the brake lever.

⇨ The rider can use the brake lever comfortably.

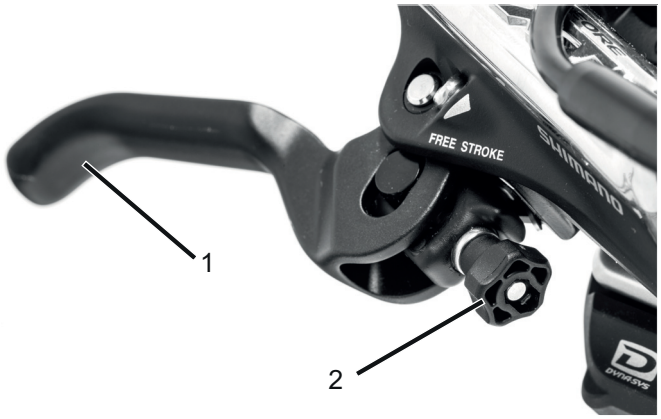


Figure 33: **Brake lever (1) with knurled screw (2)**

7 Operation

CAUTION

Crash caused by loose clothing

Laces, scarves and other loose items may become entangled in the spokes on the *wheels* and the *chain drive*. This may result in a crash and injuries.

▶ Wear sturdy footwear and close-fitting clothing.

CAUTION

Crash caused by soiling

Coarse soiling can disrupt the functions of the bicycle, e.g. the functions of the brakes, the lighting or the reflectors. This may result in a crash and injuries.

▶ Remove coarse soiling before riding.

CAUTION

Crash caused by poor road conditions

Loose objects, for example, branches and twigs, may become caught in the wheels and cause a crash.

▶ Be aware of the road conditions.

▶ Ride slowly and brake in good time.

NOTICE

When riding downhill, high speeds may be reached. The bicycle is only engineered for exceeding a speed of 25 km/h briefly. In particular the *tyres* can fail if exposed to a continuous load.

▶ Decelerate the bicycle with the brakes if higher speeds than 25 km/h are reached.

NOTICE

Heat or direct sunlight can cause the *tyre pressure* to increase above the permitted maximum pressure. This can destroy the *tyres*.

▶ Never park the bicycle in the sun.

▶ On hot days, regularly check the *tyre pressure* and adjust it as necessary.

The bicycle can be ridden within a temperature range of 5 °C - 35 °C. The effectiveness of the drive system is restricted outside of this temperature range.

Operation temperature	5 °C - 35 °C

As a result of the open construction, penetration from moisture at cold temperatures may impair individual bicycle functions.

▶ Always keep the bicycle dry and free from frost.

▶ If the bicycle is to be operated at temperatures below 3 °C, the HERCULES specialist dealer must first prepare the bicycle for winter service.

Off-road riding subjects the joints in the arms to severe strain. Take a break from riding every 30 to 90 minutes, depending on the condition of the roads.

7.1 Before each ride

CAUTION

Crash caused by unidentified damage

After a crash, accident or if the bicycle falls over, there may be barely identifiable damage, e.g. to the brake system, the quick releases or the *frame*. This may result in a crash and injuries.

▶ Remove the bicycle from service and have a HERCULES specialist dealer carry out an inspection.

CAUTION

Crash caused by material fatigue

A component may suddenly fail in case of material fatigue. This may result in a crash and injuries.

Remove the bicycle from service immediately in case of any signs of material fatigue. Have the HERCULES specialist dealer check the situation.

▶ Have the HERCULES specialist dealer carry out basic cleaning regularly. During basic cleaning, the HERCULES specialist dealer inspects the bicycle for any signs of material fatigue.

▶ Check the bicycle before each ride.

⇨ In case of any discrepancies from the *Check list before each ride*, or any anomalies of any kind, the bicycle must not be used until the cause has been clarified.

Check list before each ride

☐	Check that the bicycle is complete.
☐	Check that the lighting, reflector and brake, for instance, are sufficiently clean.
☐	You must check that the mudguards, the pannier rack and the chain guard are securely installed.
☐	Check that the front and rear wheels run true. This is particularly important if the bicycle has been transported or secured with a lock.
☐	Check the valves and the tyre pressure. Adjust as necessary before each ride.
☐	Check the front and rear wheel brakes to make sure that they are working properly. To do so, operate the brake levers while the bicycle is stationary in order to check whether resistance is generated in the usual brake lever position.
☐	Check that the running light is working.
☐	Check for unusual noises, vibrations, smells, discolouration, deformation, abrasion and wear. This indicates material fatigue.
☐	Watch out for any unusual operating sensations when braking, pedalling or steering.
☐	Check the quick releases to make sure that they are fully closed in their final position.
☐	On a bicycle with a hydraulic rim brake, check whether the locking levers are fully closed in their final positions.

7.2 Using the kickstand

CAUTION

Crash caused by a lowered kickstand

The kickstand does not fold up automatically. There is a risk of crashing if riding with the kickstand lowered.

▶ Raise the kickstand completely before the ride.

NOTICE

Because of the heavy weight of the bicycle, the kickstand may sink into soft ground, the bicycle may topple and fall over.

▶ The bicycle must only be parked on level, firm ground.

▶ It is particularly important to check the stability if the bicycle is equipped with accessories or loaded with luggage.

▶ Before the ride, raise the kickstand completely with your foot.

7.3 Using the pannier rack (Alternative equipment)

CAUTION

Crash caused by loaded pannier rack

The riding performance of the bicycle changes with a loaded *pannier rack*, in particular when steering and braking. This can lead to a loss of control. This may result in a crash and injuries.

▶ You should practice how to use a loaded *pannier rack* safely and reliably before using the bicycle in public spaces.

CAUTION

Crash caused by unsecured luggage

Loose or unsecured objects on the *pannier rack*, e.g. belts, may become caught in the rear wheel. This may result in a crash and injuries.

Objects which are fastened to the pannier rack may cover the bicycle's *reflectors* and the *running light*. The bicycle may be overseen on public roads. This may result in a crash and injuries.

▶ Secure any objects which are attached to the *pannier rack* sufficiently.

▶ Objects fastened to the *pannier rack* must never cover the *reflectors*, the *lamp* or the *rear light*.

CAUTION

Crushing the fingers in the spring flap

The spring flap on the *pannier rack* operates with a high clamping force. There is a risk of crushing the fingers.

▶ Never allow the spring flap to snap shut in an uncontrolled manner.

▶ Be careful where you position your fingers when closing the spring flap.

NOTICE

The maximum load bearing capacity is indicated on the *pannier rack*.

- ▶ Never exceed the permitted *total weight* when packing the bicycle.
- ▶ Never exceed the maximum load bearing capacity of the pannier rack.
- ▶ Never modify the *pannier rack*.

- ▶ Distribute the luggage as evenly as possible on the left and right-hand side of the bicycle.
- ▶ We recommend the use of panniers and luggage baskets.

7.4 Battery

WARNING

Risk of fire and explosion due to faulty battery

The safety electronics on damaged or faulty batteries may fail. The residual voltage can cause a short circuit. The batteries may self-ignite and explode.

- ▶ Remove batteries with external damage from service immediately and never charge them.
- ▶ If the battery becomes deformed or begins to smoke, keep at a safe distance, disconnect the power supply at the socket, and notify the fire service immediately.
- ▶ Never extinguish damaged batteries with water or allow them to come into contact with water.
- ▶ If a battery is dropped or struck but shows no signs of external damage, remove the battery from service and observe it for at least 24 hours.
- ▶ Faulty batteries are hazardous goods. Dispose of faulty batteries properly and as quickly as possible.
- ▶ Store in a dry place until disposal. Never store in the vicinity of flammable substances.
- ▶ Never open or repair the battery.

CAUTION

Risk of fire and explosion due to high temperatures

Excessively high temperatures damage the battery. The battery may self-ignite and explode.

- ▶ Never expose the battery to sustained direct sunlight.

CAUTION

Fire and explosion caused by short circuit

Small metal objects may jumper the electrical connections of the battery. The batteries may self-ignite and explode.

- ▶ Keep paper clips, screws, coins, keys and other small parts away from the battery and do not insert them into the battery.

CAUTION

Chemical burns to the skin and eyes caused by faulty battery

Liquids and vapours may leak from damaged or faulty batteries. They can irritate the airways and cause burns.

- ▶ Avoid contact with leaked liquids.
- ▶ Immediately consult a doctor in case of contact with the eyes or any discomfort.
- ▶ In case of contact with the skin, rinse off immediately with water.
- ▶ Ventilate the room well.

CAUTION

Fire and explosion caused by penetration by water

The battery is only protected from simple spray water. Penetration by water can cause a short circuit. The battery may self-ignite and explode.

- ▶ Never immerse the battery in water.
- ▶ If there is reason to believe that water may enter into the battery, the battery must be removed from service.

NOTICE

If a key is left inserted when transporting the bicycle, or when riding, it may break off or the compartment may open accidentally.

- ▶ Remove the key from the battery lock immediately after use.
- ▶ We recommend that you attach the key to a key ring, for example.

7.4.1 Down tube battery (Alternative version)

✓ Before the battery is to be removed or inserted, switch off the battery and the drive system.

7.4.1.1 Removing the down tube battery

- ▶ Open the battery lock with the key.
- ▶ Tip the down tube battery out of the top mount.
- ▶ Pull the down tube battery out of the bottom mount.

7.4.1.2 Inserting the down tube battery

- ▶ Place the down tube battery on the contacts in the bottom mount.
- ▶ Remove the key from the lock.
- ▶ Tip the battery into the top mount as far as it will go.
- ⇨ There is an audible clicking noise.
- ▶ Check the battery to make sure it is firmly in place.

7.4.2 Pannier rack battery (Alternative version)

✓ Before the battery is to be removed or inserted, switch off the battery and the drive system.

7.4.2.1 Removing the pannier rack battery

▶ Open the battery lock with the key.

▶ Pull the pannier rack battery backwards and out of the *pannier rack battery mount*.

7.4.2.2 Inserting the pannier rack battery

▶ Remove the key from the lock.

▶ Insert the pannier rack battery into the *pannier rack battery mount* with the contacts first so that it clicks into place.

▶ Check the battery to make sure it is firmly in place.

7.4.3 Integrated battery (Alternative version)

✓ Before the battery is to be removed or inserted, switch off the battery and the drive system.

7.4.3.1 Removing the integrated battery

▶ Open the battery lock with the key.

⇨ The integrated battery is released and falls into the retainer guard.

▶ Support the battery from below with your hand. Use the other hand to push on the retainer guard from above.

⇨ The integrated battery is completely released and falls into your hand.

▶ Pull the integrated battery from the frame.

▶ Remove the key from the lock.

7.4.3.2 Inserting the integrated battery

▶ Place the battery in the bottom mount with the contacts first.

▶ Flip the integrated battery up so that it is held by the retainer guard.

▶ Push the integrated battery upwards so that it audibly clicks into place.

▶ Check the battery to make sure it is firmly in place.

▶ Lock the battery with the key. Otherwise the battery may fall out of the mount when you open the lock.

▶ Remove the key from the lock.

7.4.4 Charging the battery

CAUTION

Fire caused by overheated charger

The charger heats up when charging the battery. In case of insufficient cooling, this can result in fire or burns to the hands.

- ▶ Never use the charger on a highly flammable surface (e.g. paper, carpet etc.).
- ▶ Never cover the charger during the charging process.

CAUTION

Electric shock caused by penetration by water

If water penetrates into a charger, there is a risk of electric shock.

- ▶ Never charge the battery outdoors.

CAUTION

Electric shock in case of damage

Damaged chargers, cables and plug connectors increase the risk of electric shock.

- ▶ Check the charger, cable and plug connector before each use. Never use a damaged charger.

- ▶ The ambient temperature during the charging process must be within the range from 10 °C to 30 °C.

Charging temperature	10 °C - 30 °C

- ✓ The battery can remain on the bicycle or be removed for charging.
- ✓ Interrupting the charging process does not damage the battery.
- ✓ On a bicycle which is equipped with two batteries, the charging process for both batteries is started from the pannier rack battery.

▶ Remove the rubber cover from the battery.

▶ Connect the mains plug of the charger to a normal domestic, grounded socket.

Connection data	230 V, 50 Hz

▶ Connect the charging cable to the battery's charging port.

⇨ The charging process starts automatically.

⇨ During the charging process the operating and charge status indicator indicates the charge status. When the drive system is switched on, the *display* shows the charging process.

⇨ The charging process is complete when the LEDs of the operating and charge status indicator go out.

CAUTION **Risk of fire and explosion caused by damaged batteries.** The safety electronics on damaged or faulty batteries may fail. The residual voltage can cause a short circuit. The batteries may self-ignite and explode. If the battery becomes deformed or begins to smoke, keep at a safe distance, disconnect the power supply at the socket, and notify the fire service immediately. Never extinguish damaged batteries with water or allow them to come into contact with water.

NOTICE If a fault occurs during the charging process, a system message is displayed. Remove the charger and the battery from operation immediately and follow the instructions.

7.4.5 Waking the battery

✓ When not used for a longer period, the battery switches to sleep mode for self-protection. The LEDs of the operating and charge status indicator do not light up.

▶ Press the *On-Off button (battery)*.

▶ The battery's operating and charge status indicator indicates the charge status.

7.5 Electric drive system

7.5.1 Switching on the drive system from the display

CAUTION

Crash caused by lack of readiness for braking

When it is switched on, the drive system can be activated by the application of force on the pedals. There is a risk of a crash if the drive is activated unintentionally, and the brake is not reached.

▶ Never start the electric drive system, or switch it off immediately, if the brake cannot be reached safely and reliably.

✓ A sufficiently charged battery has been inserted on the bicycle.

✓ The *display* has been inserted correctly into the mount.

✓ The battery is firmly in place. The key has been removed.

There are two options for switching on the drive system.

1 Battery On-Off button

▶ Press the **On-Off button (battery)** once.

2 Display On-Off button

▶ Press the **On-Off button (display)** once.

⇨ As soon as the system has been activated, ACTIVE LINE/PERFORMANCE LINE appears briefly on the *display*.

⇨ After switching on, a speed of 0 KM/H is displayed on the *display*. If this is not the case, you must check whether the *display* has been engaged properly in place.

⇨ If the drive system is switched on, the drive is activated as soon as the pedals are moved with sufficient force.

7.5.2 Switching off the drive system

The system switches off automatically ten minutes after the last command. The are three options for switching off the drive system manually.

1 Display On-Off key

▶ Press the **On-Off button** (display) once.

2 Battery On-Off key

▶ Press the **On-Off button (battery)**.

3 Removing the display

▶ Remove the *display* from the mount.

⇨ The LEDs of the operating and charge status indicator go out.

7.6 Display (Alternative version)

7.6.1 Using the USB port

The USB port can be used to operate external devices which can be connected using a standard micro A/ micro B USB 2.0 cable.

▶ Open the protective flap on the USB port.

▶ Replace the protective flap after using the USB port.

NOTICE Any moisture which enters through the USB port may trigger a short circuit in the *display*. Regularly check the position of the rubber cover on the USB port and adjust it as necessary.

7.6.2 Charging the internal display battery

NOTICE

The internal display battery discharges when it is not used. This can cause damage to the internal display battery.

▶ Charge the internal display battery every 3 months for at least 1 hour.

✓ If the internal display battery is low when switching on the *display*, ATTACH TO BIKE appears for three seconds in the text display. The *display* then switches back off.

The internal display battery charges automatically during the ride. In addition there are two options for charging the battery.

1 Charging on the bicycle

▶ When a battery has been inserted on the bicycle, place the *display* in the *mount for the display*,

▶ Press the *On-Off button (battery)*.

▶ Use the bicycle.

2 Charging using the USB port

▶ Open the protective flap on the USB port.

▶ Connect the USB port to a commercially available USB charger or the USB port on a computer (5 V charge voltage; max. 500 mA charge current), using a suitable USB cable.

✓ USB CONNECTED is displayed on the *display*.

7.6.3 Removing and attaching the display

NOTICE

If the rider is not present, the *display* can be used without authorisation, e.g. it may be stolen, the system settings may be changed or journey information may be read.

▶ Remove the *display* when the bicycle is parked.

The system is switched off by removing the *display*.

Removing the display

▶ Push the *display catch* down and simultaneously push the *display* forwards and out of the *mount*.

Attaching the display

▶ Place the *display* on the *mount*.

▶ Push the *display* back as far as it will go.

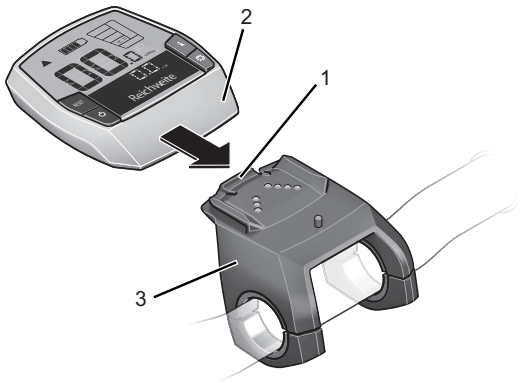


Figure 34: **Attaching the display**

1 Display catch
2 Display
3 Mount

7.6.4 Using the pushing aid

NOTICE

The pedals turn when using the pushing aid because of the design.

▶ When the pushing aid is in use, the bicycle must be steered securely with both hands.

▶ Allow for enough freedom of movement for the pedals.

The pushing aid provides the rider with assistance when pushing the bicycle. The maximum speed in the process is 6 km/h.

✓ The tractive power of the pushing aid and its speed can be influenced by the selection of gear. To spare the drive, first gear is recommended for travelling uphill.

✓ The level of assistance OFF must not be selected.

▶ Press the *pushing aid button* once to activate the pushing aid.

▶ Press and hold the *plus button* within 3 seconds to switch on the pushing aid.

▶ Release the *plus button* to shut off the pushing aid.

7.6.5 Using the running light

✓ To switch on the *running light*, the drive system has to be switched on already.

▶ Press the *running light button*.

⇨ The *running light* is switched on (*running light symbol* is displayed) or switched off (*running light symbol* is not displayed).

7.6.6 Selecting the level of assistance

▶ Press the *plus button* to increase the level of assistance.

▶ Press the *minus button* to reduce the level of assistance.

7.6.7 Journey information

The displayed *journey information* can be changed and partially reset.

7.6.7.1 Switching the displayed journey information

▶ Repeatedly press the *info button (display)* until the desired item of *journey information* is displayed.

7.6.7.2 Resetting the journey information

▶ Press the *RESET button*.

⇨ The items of *journey information Max Speed*, *Avg Speed*, *Trip Time* and *Trip distance* are reset. The *Odometer* item of journey information cannot be reset.

7.6.8 Changing the system settings

The *system settings* can be changed.

▶ Press the *info button (display)* and the *RESET button* together.

⇨ CONFIGURATION is displayed on the *display*.

▶ Repeatedly press the *info button (display)* until the *system setting which you wish to change,* is displayed.

▶ Press the *plus button* or the *minus button* to change the displayed setting.

▶ Press and hold the *RESET button* for 3 seconds to save the changed *system settings* and return to the *journey information*.

7.7 Gear shift

The selection of the appropriate gear is a prerequisite for a physically comfortable ride and making sure that the electric drive system functions properly. The ideal pedalling frequency is between 40 and 60 revolutions per minute.

7.7.1 Manual (Alternative version)

▶ Select the appropriate gear with the *shifter* or *gear shift twist grip*.

⇨ The gear shift switches the gear.

7.7.2 Automated (Alternative version)

7.7.2.1 Selecting the automated or manual gear shift

With the continuously variable hub gear, you can switch between the automatic shift mode *(NuVinci cadence)* and manual shift mode *(NuVinci Gear)*.

▶ Select the item of journey information *NuVinci cadence*.

▶ Press and hold the *Info button* for longer than 1 second.

⇨ The operating modes *NuVinci cadence* and *NuVinci Gear* switch.

- In *NuVinci cadence* operating mode (automated gear shift*)* the *desired pedalling frequency* is automatically kept constant.
- In *NuVinci Gear* operating mode (manual gear shift) the preconfigured gears can be selected manually.

7.7.2.2 Setting the desired pedalling frequency

The set desired pedalling frequency sets the current speed.

✓ Only select the desired pedalling frequency when the bicycle is stationary.

▶ Select the item of journey information *NuVinci cadence.*

▶ Set the desired pedalling frequency:

- Use the plus button to increase the pedalling frequency.
- Use the minus button to reduce the pedalling frequency.

⇨ The pedalling frequency is displayed on the screen.

7.7.2.3 Selecting the gear manually

The level of assistance cannot be changed during manual shifting.

✓ The item of journey information *NuVinci Gear has been selected* [▷ *Chapter 7.7.2.1, page 98*].

▶ Switch gear.

- You use the plus button to select one gear up.
- You use the minus button to select one gear down.

⇨ The selected gear is displayed on the screen.

7.8 Brakes

CAUTION

Crash caused by incorrect use

Handling the brake improperly can lead to loss of control or crashes, which may result in injuries.

- ▶ Shift your weight back and down as far as possible.
- ▶ Practise braking and emergency braking before the bicycle is used in public spaces.

CAUTION

Crash caused by wet conditions

The *tyres* may slip on wet roads. In wet conditions you must also expect a longer braking distance. The braking sensation differs from the usual sensation. This can cause loss of control or a crash, which may result in injuries.

- ▶ Ride slowly and brake in good time.

CAUTION

Crash after cleaning, servicing or repair

After cleaning, servicing or repairing the bicycle, the braking effect may be temporarily unusually weak. This may result in a crash and injuries.

- ▶ After cleaning, servicing or repair, carry out a few test brake applications.

CAUTION

Burns caused by heated brake

The brakes may become very hot during operation. There is a risk of burns in case of contact.

- ▶ Never touch the components of the brake directly after the ride.

7.8.1 Using the brake

- ▶ Pull the *brake lever* until the desired speed has been reached.

7.8.2 Using the back-pedal brake (Alternative equipment)

✓ The best braking effect is achieved if the pedals are in the 3 o'clock and 9 o'clock position when braking. To bridge the free travel between the riding movement and the braking movement, it is recommendable to pedal a little beyond the 3 o'clock and 9 o'clock position before you pedal in the opposite direction to the *direction of travel* and start braking.

▶ Pedal in the opposite direction to the *direction of travel* until the desired speed has been reached.

7.9 Suspension and damping

7.9.1 Locking the front wheel suspension (Alternative equipment)

When the *fork lock* is in the open position, the *suspension system* has activated suspension and thus provides the rider and the bicycle with relief. Riding with the *fork lock* open should therefore be preferred for everyday riding.

When riding downhill or at high speed, for instance, the force which is exerted on the drive is absorbed by the *suspension system* and reduced by up to 50%. In these cases it is recommendable to close the suspension fork.

The *fork lock* may be situated directly on the fork or on the handlebars, depending on the version.

7.9.1.1 Fork lock on the suspension head

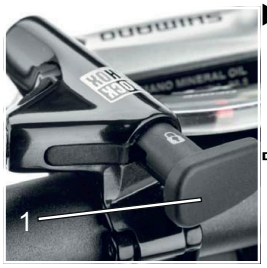
- In order to lock the *front wheel suspension*, shift the LOCKING LEVER to the *LOCK* position.
- In order to release the *front wheel suspension*, shift the *locking lever* to the OPEN position.

Figure 35: **Fork lock on the suspension for head with locking lever (1), example**

7.9.1.2 Locking lever on handlebars, version I

▶ To lock the *suspension system*, push the locking slider out of the pushed-in position.

⇨ The locking slider stops in the pushed-out position. A padlock symbol indicates that the fork lock is locked.



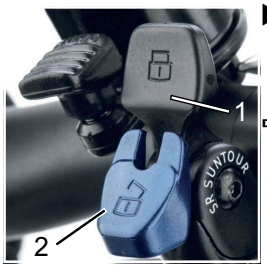
▶ To release the *front wheel suspension*, push the locking slider out of the pushed-out position.

⇨ You can tell that the fork lock is open if the locking slider is pushed in.

Figure 36: **Fork lock on handlebars, version I, with locking slider (1)**

7.9.1.3 Locking lever on handlebars, version II

▶ To lock the *suspension system*, push the black locking lever. The locking lever features a closed padlock symbol.



▶ To release the *front wheel suspension*, push the blue unlocking lever.

⇨ The unlocking lever features an open padlock symbol.

Figure 37: **Fork lock on handlebars, version II, with locking lever (1) and unlocking lever (2) (example)**

7.9.1.4 Fork lock on handlebars, version III

- ▶ To lock or release the *front wheel suspension*, push the *long lever*.
- ▶ To reset the function of the *long lever*, push the *short lever*.

Figure 38: **Fork lock on handlebars, version III, with long lever (1) and short lever (2), example**

7.9.1.5 Fork lock on handlebars, version IV

- ▶ To lock the *front wheel suspension*, push the locking lever upwards.
- ▶ To release the *front wheel suspension*, push the unlocking knob.

Figure 39: **Fork lock on handlebars, version IV, with locking lever (1) and unlocking knob (2)**

7.9.1.6 Fork lock on handlebars, version V

- ▶ To lock the *front wheel suspension*, push the upper locking lever.

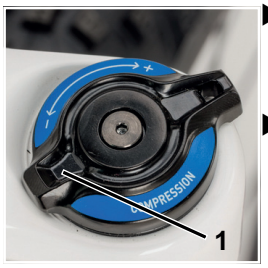
⇨ The locking lever features a closed padlock symbol.

▶ To release the *front wheel suspension*, push the side unlocking lever.

⇨ The side unlocking lever features an open padlock symbol.

Figure 40: **Fork lock on handlebars, version V, with locking lever (1) and unlocking lever (2)**

7.9.2 Locking the compression damper



▶ In order to lock the suspension, turn the locking lever in the plus direction.

▶ In order to release the suspension, turn the locking lever in the minus direction.

Figure 41: **Compression damper with locking lever (1), example**

7.10 Folding (Alternative equipment)

NOTICE

- Never crush or bend cables, electric cables or brake cables when folding.

7.10.1 Folding the folding bicycle

The bicycle is folded in eight steps.

- Switch off the *electric drive system*.
- Use the *kickstand*.
- Remove the *display*.
- Remove the *battery* if necessary.
- Fold the *pedal*.
- Fold the *stem.*
- Push in the *seat post*.
- Fold the *frame*.

7.10.1.1 Folding the pedal

- Push the pedal against the pedal crank with the foot.

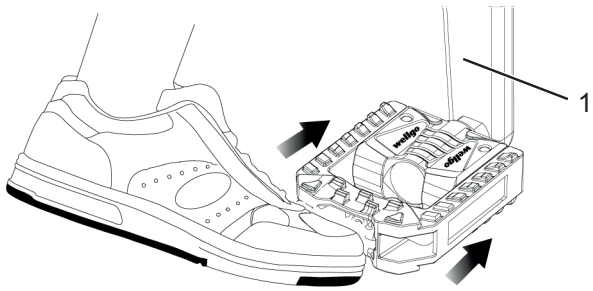


Figure 42: **Pushing the pedal against the pedal crank (1)**

▶ Fold the pedal against the pedal crank.

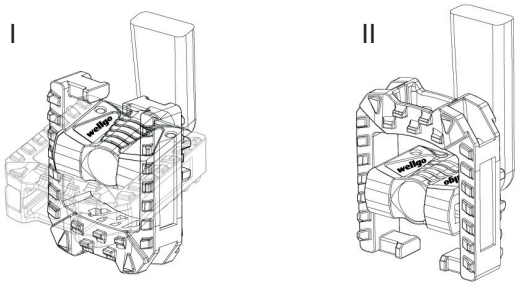


Figure 43: **Folding the pedal up (I) or down (II)**

7.10.2 Folding the stem, version I (Alternative version)

▶ Open the *clamping lever on the stem quick release*.

▶ Pull the *locking lever on the stem* upwards and simultaneously pivot it 90° to the right or the left.

⇨ You feel the *handlebars* click into place.

▶ Push in the *handlebars*.

▶ Close the *clamping lever on the stem quick release*.

Figure 44: **Opened clamping lever on the stem quick release (3) on the stem (2), version I, with locking lever on the stem (1)**

7.10.2.1 Folding the stem, version II (Alternative version)

- ▶ Open the *clamping lever on the stem quick release*.
- ▶ Push the *unlocking knob*.
- ▶ Pivot the *handlebars* 90° to the right or left.
- ⇨ You feel the *handlebars* click into place.
- ▶ Close the *clamping lever on the stem quick release*.

Figure 45: **Stem, version II with clamping lever on the stem quick release (1) and unlocking knob (2)**

7.10.2.2 Pushing in the seat post

- ▶ Open the *clamping lever for the quick release on the seat post*.
- ▶ Push in the *saddle* to the minimum position.
- ▶ Close the *clamping lever for the quick release on the seat post*.

7.10.2.3 Folding the frame

- ▶ Pivot the *frame locking lever* upwards.
- ⇨ The *frame clamping lever* can be opened freely.
- ▶ Open the *frame clamping lever*.
- ▶ Pivot in the frame as far as it will go.

Figure 46: **Frame, with closed frame clamping lever (1) and open frame locking lever (2)**

7.10.3 Preparing the bicycle so that it is ready to ride again

The HERCULES specialist dealer shows the user or rider how the bicycle is folded, how it is prepared so that it is ready to ride again, and how the quick releases are used.

The bicycle is prepared so that it is ready to ride again in eight steps.

- ▶ Switch off the *drive system*.
- ▶ Use the *kickstand*.
- ▶ Fold out the *frame*.
- ▶ Adjust the *stem.*
- ▶ Adjust the *saddle*.
- ▶ Fold out the *pedal*.
- ▶ Insert the *battery*.
- ▶ Attach the *display*.

7.10.3.1 Folding out the frame

- ▶ Completely fold out the frame.
- ▶ Close the *frame clamping lever*.
- ⇨ The *frame clamping lever* rests on the limit stop. The *frame locking lever* holds the *frame clamping lever*. The *frame clamping lever* is closed.

Figure 47: **Frame, with closed frame clamping lever (1) and closed frame locking lever (2)**

7.10.3.2 Folding out the pedal

▶ Push the pedal against the pedal crank with the foot from the front.

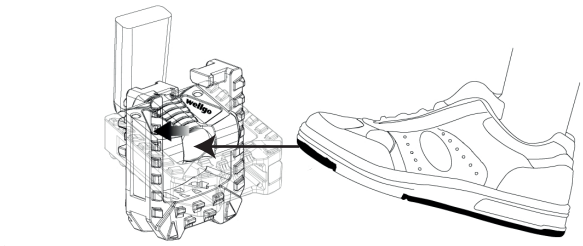


Figure 48: **Pushing the pedal against the pedal crank (1)**

▶ Use the foot to fold the pedal up or down.

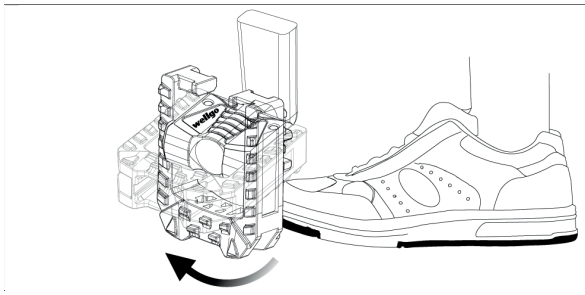


Figure 49: **Folding up the pedal**

8 Maintenance

Cleaning check list

☐	Lubricating the chain	once a month
☐	Cleaning the battery	once a month
☐	Basic cleaning and preservation of all components	at least every six months
☐	Cleaning the charger	at least every six months

Maintenance check list

☐	Checking the position of the USB rubber cover	before each ride
☐	Checking for tyre wear	once a week
☐	Checking for rim wear	once a week
☐	Checking the tyre pressure	once a week
☐	Checking for brake wear	once a month
☐	Checking the electrical cables and Bowden cables for damage and to make sure they are fully functional	once a month
☐	Checking the chain tension	once a month
☐	Checking the tension of the spokes	every three months
☐	Checking the gear shift setting	every three months
☐	Checking the suspension fork for wear and to make sure it is fully functional	every three months

Service check list

☐	Service by the specialist dealer	every six months

8.1 Cleaning and servicing

CAUTION

Crash and falling caused by unintentional activation

There is a risk of injury if the drive system is activated unintentionally.

▶ Remove the battery before cleaning.

The following servicing measures must be carried out regularly [▷ *Check list, page 112*]. Servicing can be performed by the user and rider. In case of any doubt, consult the HERCULES specialist dealer.

8.1.1 Battery

CAUTION

Fire and explosion caused by penetration by water

The battery is only protected from simple spray water. Penetration by water can cause a short circuit. The battery may self-ignite and explode.

▶ Never clean the battery with a high-pressure water device, water jet or compressed air.

▶ Never immerse the battery in water.

▶ Remove the battery from the bicycle before cleaning.

▶ Only clean the electrical connections of the battery with a dry cloth or brush.

▶ Wipe off the decorative sides with a damp cloth.

8.1.2 Display

NOTICE

If water enters into the *display,* it will be destroyed.

▶ Never immerse the *display* in water.

▶ Remove the *display* from the bicycle before cleaning.

▶ Carefully clean the *display* with a damp, soft cloth.

8.1.3 Basic cleaning and preservation

CAUTION

Crash caused by brake failure

After cleaning, servicing or repairing the bicycle, the braking effect may be temporarily unusually weak. This may result in a crash and injuries.

▶ Never apply care products or oil to the brake disks or brake pads, or the braking surfaces on the *rims*.

▶ After cleaning, servicing or repair, carry out a few test brake applications.

Water may enter into the inside of the bearings if you use a steam jet. The lubricant inside is diluted, the friction increases and, as a result, the bearings are destroyed in the long term.

▶ Never clean the bicycle with a steam jet.

Greased parts, e.g. the *seat post*, the *handlebars* or the *stem*, may no longer be safely and reliably clamped.

▶ Never apply grease or oil to the clamping areas.

▶ Clean the bicycle with a damp cloth. Mix a little neutral soap with the cleaning water.

▶ Then use wax or oil on the bicycle as a preservative agent.

8.1.4 Chain

▶ Clean and lubricate the *chain* and the *chain wheels* using the stipulated care products.

8.2 Maintenance

CAUTION

Crash and falling caused by unintentional activation

There is a risk of injury if the drive system is activated unintentionally.

▶ Remove the battery before maintenance.

The following maintenance measures must be carried out regularly [▷ *Check list, page 112*]. They can be carried out by the user and rider. In case of any doubt, consult the HERCULES specialist dealer.

8.2.1 Wheel

NOTICE

If the pressure is too low in the tyre, the tyre does not achieve its load bearing capacity. The tyre is not stable and may come off the rim.

If the pressure in the tyre is too high, the tyre may burst.

▶ Check the tyre pressure against the specifications [▷ *Data sheet, page 1*]

▶ *Adjust the tyre pressure* as necessary.

▶ Check the *tyre* wear.

▶ Check the *rim* wear.

- The rims of a rim brake with invisible wear indicator are worn as soon as the wear indicator becomes visible in the area of the rim joint.
- The rims with visible wear indicator are worn as soon as the black, all-round groove on the pad friction surface becomes invisible. We recommend that you also replace the *rims* with every second brake lining replacement.

▶ Check the tension of the spokes.

8.2.2 Brake system

- On bicycles with a rim brake, check the position of the brake pads. The brake pads must be aligned exactly to the rims.
  Replace the brake pads on the rim brake when the profile (check notches) has reached a remaining depth of 1 mm.
- Replace the brake linings on the disk brake when the pad thickness has reached 0.5 mm.

8.2.3 Electrical cables and brake cables

- Check all visible electrical cables and brake cables for damage. If, for example, the sheathing is compressed, the bicycle will need to be removed from service until the brake cables have been replaced.
- Check all electrical cables and Bowden cables to make sure they are fully functional.

8.2.4 Gear shift

- Check the gear shift and the *shifter* or the *twist grip* setting and adjust it as necessary.

8.2.5 USB port

NOTICE

Any moisture which enters through the USB port may trigger a short circuit in the *display*.

- Regularly check the position of the *cover on the USB port* and adjust it as necessary.

8.2.6 Chain or belt tension

NOTICE

Excessive chain or belt tension increases wear.

If the chain or belt tension is too low, there is a risk that the *chain* or belt will slip off the *chain wheels*.

▶ Check the chain and belt tension once a month.

▶ Check the chain or belt tension in three or four positions, turning the crank a full revolution.

▶ If the *chain* or the belt can be pushed more than 2 cm, the *chain* or belt will need to be tensioned again by the HERCULES specialist dealer.

▶ If the *chain* or the belt can only be pushed less than 1 cm, the *chain* or belt will need to be relieved of tension accordingly.

⇨ The ideal chain or belt tension has been achieved if the *chain* or the belt can be pushed a maximum of 2 cm in the middle between the pinion and the toothed wheel. The crank must also turn without resistance.

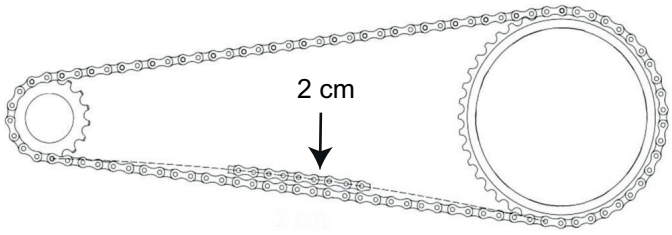


Figure 50: **Checking the chain and belt tension**

8.3 Service

CAUTION

Crash and falling caused by unintentional activation

There is a risk of injury if the drive system is activated unintentionally.

▶ Remove the battery before the service.

CAUTION

Crash caused by material fatigue

If the service life of a component has expired, the component may suddenly fail. This may result in a crash and injuries.

▶ Have the HERCULES specialist dealer carry out six-monthly basic cleaning of the bicycle, preferably at the same time as the stipulated servicing work.

A service must be performed by the HERCULES specialist dealer at least every six months [▷ *Check list, page 112*]. This is the only way to ensure that the bicycle remains safe and fully functional.

▶ During basic cleaning, the HERCULES specialist dealer inspects the bicycle for any signs of material fatigue.

▶ The HERCULES specialist dealer checks the software version of the drive system and updates it. The electrical connections are checked, cleaned and preservative agent is applied. The electrical cables are inspected for damage.

▶ The further servicing measures correspond to those which are recommended for a bicycle as per EN 4210. Particular attention is paid to the rim and brake wear. The spokes are re-tightened in accordance with the findings.

8.4 Correcting and repairing

8.4.1 Using original parts only

The individual parts of the bicycle have been selected carefully and to matched to each other.

Only original parts must be used for maintenance and repair.

The constantly updated lists of approved accessories and parts are available to HERCULES specialist dealers.

8.4.2 Adjusting the kickstand

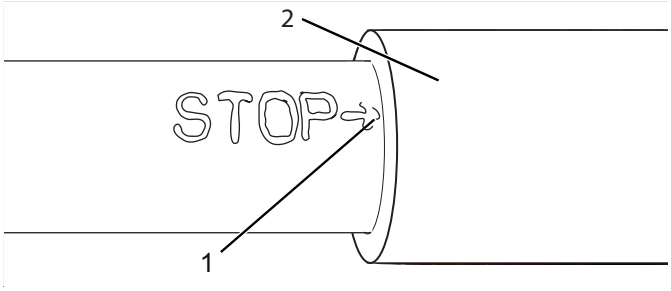


Figure 51: **STOP marking on the kickstand**

1 STOP marking
2 Screw foot

✓ The setting for the kickstand must only be made when the bicycle is stationary.

▶ The length of the kickstand is adjusted by screwing the screw foot in or out.

▶ The stability of the bicycle must be checked after each adjustment.

NOTICE If the kickstand is unscrewed beyond the STOP marking, the kickstand may break and the bicycle may fall over. Never screw out the screw foot beyond the STOP marking.

8.4.3 Wheel quick release

CAUTION

Crash caused by unfastened quick release

A faulty or incorrectly installed quick release may become caught in the brake disk and block the wheel. This will cause a crash.

▶ Install the front wheel quick release lever on the opposite side to the brake disk.

CAUTION

Crash caused by faulty or incorrectly installed quick release

The brake disk becomes very hot during operation. Parts of the quick release may become damaged as a result. The quick release comes loose. This will result in a crash and injuries.

▶ The front wheel quick release lever and the brake disk must be situated on opposite sides.

CAUTION

Crash caused by incorrectly set clamping force

Excessively high clamping force will damage the quick release and cause it to lose its function.

Insufficient clamping force will cause a detrimental transmission of force. The suspension fork or the frame may break. This will result in a crash and injuries.

▶ Never fasten a quick release using a tool (e.g. hammer or pliers).

▶ Only use the clamping lever with the specified set clamping force.

8.4.4 Clamping the clamping lever

The clamping lever for the quick release is marked OPEN and CLOSE. If you can read the word OPEN, the quick release is open. If you can read the word CLOSE, the quick release is clamped.

▶ Align the clamping lever properly and push it through as far as it will go.

⇨ The wheel clamping lever is clamped if the clamping lever can be moved easily from the open final position into the middle and has to be pressed with the fingers or base of the thumb from the middle point onwards.

8.4.5 Clamping version I

▶ Hold the open clamping lever. Screw the setting nut tight on the opposite side.

▶ Clamp the clamping lever.

⇨ The final position of the clamping lever is at a right angle to the fork or frame.

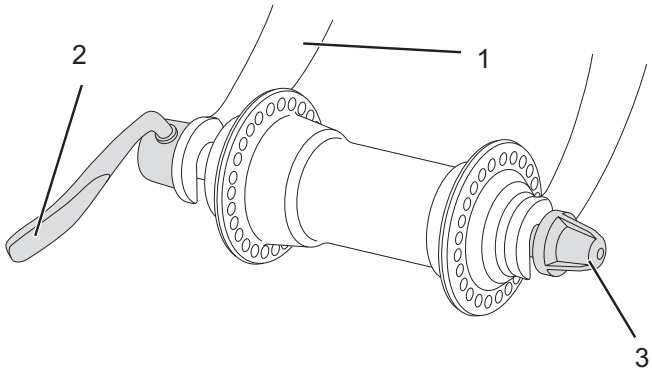


Figure 52: **Wheel quick release, version I, with clamping lever (2), fork (1) and setting nut (3)**

Checking and setting the clamping force of the quick releases

If the clamping lever cannot be moved into the final position just by pushing it with the hand, or if it is too loose, its clamping force will need to be readjusted.

✓ The clamping lever is completely open.

▶ Turn the setting nut a little.

▶ Clamp the clamping lever.

▶ Repeat the steps until the proper angle has been achieved.

8.4.6 Clamping version II

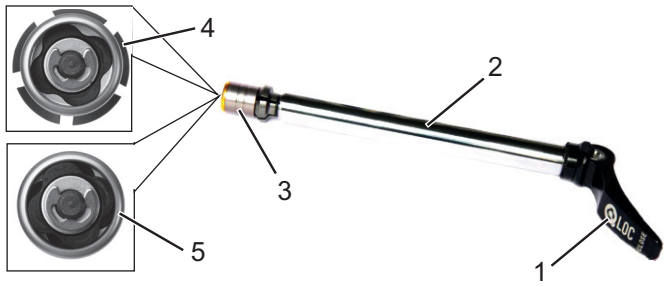


Figure 53: **Quick release, version II, with clamping lever (1), axle (2), setting nut (3), and detailed view of the open (4) and closed (5) flange**

✓ The clamping lever is completely open.

▶ Push the axle into the hub as far as it will go.

▶ Align the clamping lever.

▶ Close the clamping lever

⇨ The final position of the clamping lever is forward, parallel to the fork.

8.4.7 Clamping version III

NOTICE

If the clamping force is insufficient, have the HERCULES specialist dealer inspect it.

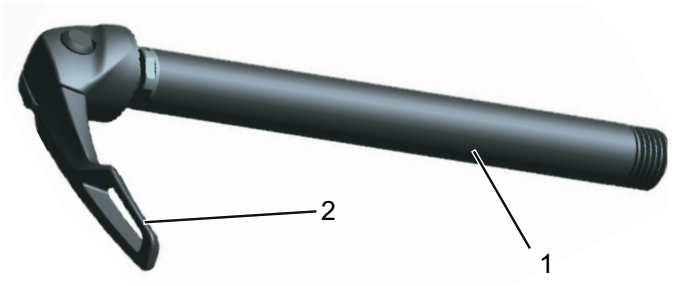


Figure 54: **Quick release, version III, with axle (1) and clamping lever (2)**

- ▶ Push the axle into the hub as far as it will go with the clamping lever completely open.
- ▶ Screw the quick release on the open clamping lever clockwise into the hub as far as it will go.
- ▶ Screw it out one turn.
- ▶ Use the fingers to screw in the clamping lever in the semi-open position, roughly in the middle between OPEN and CLOSE, until you feel resistance.
- ▶ Clamp the clamping lever.

8.4.8 Clamping version IV

▶ Push the axle into the hub as far as it will go with the clamping lever open.

▶ Screw the clamping lever clockwise into the correct final position.

▶ Clamp the clamping lever.

Setting the clamping force

If the clamping force is set too high, the clamping lever cannot be pushed into the closed final position.

▶ Turn the twist knob:

- Turn 1/8 turn anti-clockwise to reduce the clamping force.
- Turn 1/8 turn clockwise to increase the clamping force.

▶ Clamp the clamping lever.

▶ If the clamping lever is not yet in the proper final position, repeat the steps until the proper final position has been achieved.

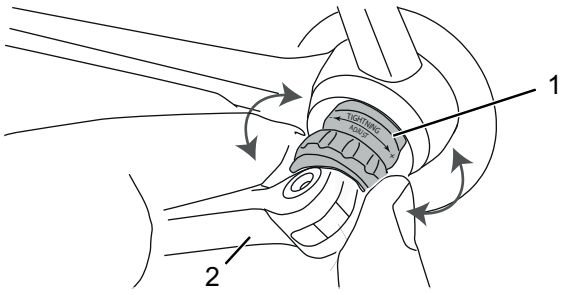


Figure 55: **Wheel quick release, version IV, with twist knob (1) and clamping lever (2)**

8.4.9 Clamping version V

CAUTION

Crash caused by unfastened quick release

The clamping force of the quick release lever is set once during assembly and is not an indication that the wheel axle is sufficiently fastened. The axle may come loose if the closed quick release is turned. This will result in a crash and injuries.

▶ Never adjust or turn a quick release after closing it, e.g. in order to correct the final position.

▶ Push the axle into the hub from the left until it meshes in the thread on the right-hand fork end.

Figure 56: **Wheel quick release, version V, with twist knob (1) and clamping lever (2)**

▶ Flip the quick release lever into the recess.

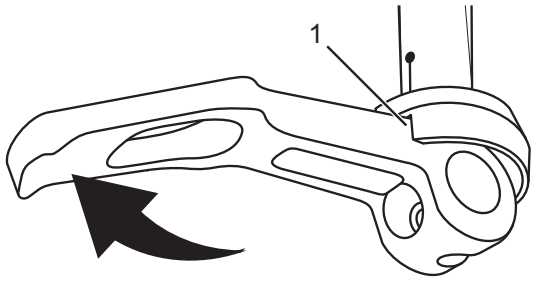


Figure 57: **Flipping the quick release into the recess (1)**

▶ Turn the axle on the quick release clockwise until the axle is firmly in place.

▶ Pull the lever from the recess and clamp it properly.

▶ The clamping force of the lever is not an indication of the tightening torque of the axle.

Setting the clamping force

If the clamping lever cannot be moved into its proper final position by pushing it with the hand, or if it is too loose, its clamping force will need to be readjusted.

▶ Open the quick release lever.

▶ Connect a 2.5 mm hexagon socket spanner to the middle of the clamping lever.

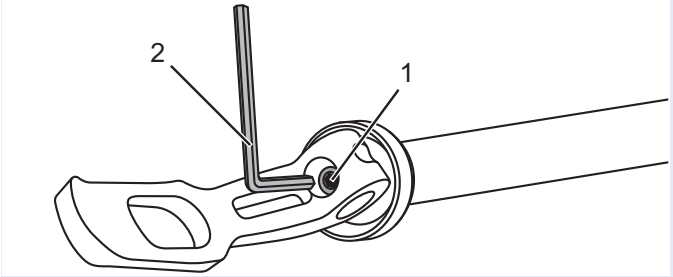


Figure 58: **Setting the clamping force in the middle of the clamping lever (1) with a hexagon socket spanner (2)**

▶ Turn the hexagon socket spanner:

- clockwise to increase the clamping force and
- anti-clockwise to reduce the clamping force.

▶ Clamp the clamping lever.

▶ If the clamping lever is not yet in the proper final position, repeat the steps until the proper final position has been achieved.

8.4.4 Adjusting the tyre pressure

8.4.4.1 Dunlop valve

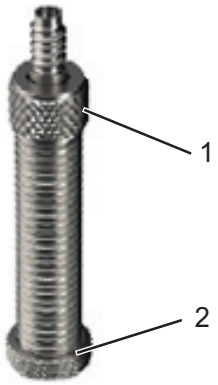
The tyre pressure cannot be measured on the simple Dunlop valve. The tyre pressure is therefore measured in the filling hose when pumping slowly with the bicycle pump.

✓ It is recommendable to use a bicycle pump with a pressure gauge. The operating instructions for the bicycle pump must be adhered to.

▶ Unscrew and remove the valve cap.

▶ Connect the bicycle pump.

▶ Pump up the tyre slowly and pay attention to the tyre pressure in the process.



⇨ The tyre pressure has been adjusted as per the data [▷ *Data sheet, page 1*].

▶ If the tyre pressure is too high, unfasten the union nut, let off air and tighten the union nut again.

▶ Remove the bicycle pump.

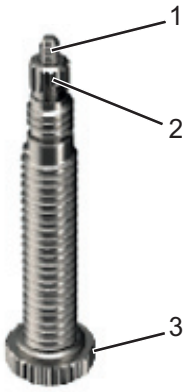
▶ Screw the valve cap tight.

✓ Screw the rim nut gently against the rim with the tips of your fingers.

Figure 59: **Dunlop valve with union nut (1) and rim nut (2)**

8.4.4.2 Presta valve

- ✓ It is recommendable to use a bicycle pump with a pressure gauge. The operating instructions for the bicycle pump must be adhered to.
- ▶ Unscrew and remove the valve cap.
- ▶ Open the knurled nut around four turns.
- ▶ Carefully apply the bicycle pump so that the valve insert is not bent.
- ▶ Pump up the tyre slowly and pay attention to the tyre pressure in the process.



- ⇨ The tyre pressure has been adjusted as per the data [▷ *Data sheet, page 1*].
- ▶ Remove the bicycle pump.
- ▶ Tighten the knurled nut with your finger tips.
- ▶ Screw the valve cap tight.
- ▶ Screw the rim nut gently against the rim with the tips of your fingers.

Figure 60: **Presta valve with valve insert (1), knurled nut (2) and rim nut (3)**

8.4.4.3 Schrader valve

✓ It is recommendable to use a bicycle pump with a pressure gauge. The operating instructions for the bicycle pump must be adhered to.

▶ Unscrew and remove the valve cap.

▶ Connect the bicycle pump.

▶ Pump up the tyre slowly and pay attention to the tyre pressure in the process.

⇨ The tyre pressure has been adjusted as per the data [▷ *Data sheet, page 1*].

▶ Remove the bicycle pump.

▶ Screw the valve cap tight.

1▶ Screw the rim nut gently against the rim with the tips of your fingers.

Figure 61: **Schrader valve with rim nut (1)**

8.4.5 Adjusting the gear shift

If the gears cannot be selected cleanly, the setting for the shift cable tension will need to be adjusted.

- ▶ Carefully pull the *adjusting sleeve* away from the shifter housing, turning it in the process.
- ▶ Check the function of the gear shift after each adjustment.

If the gear shift cannot be set this way, the assembly of the gear shift will need to be inspected by the HERCULES specialist dealer.

8.4.5.1 Cable-operated gear shift, single-cable (Alternative version)

- ▶ For a smooth gear shift, adjust the adjusting sleeves on the gear shift housing.

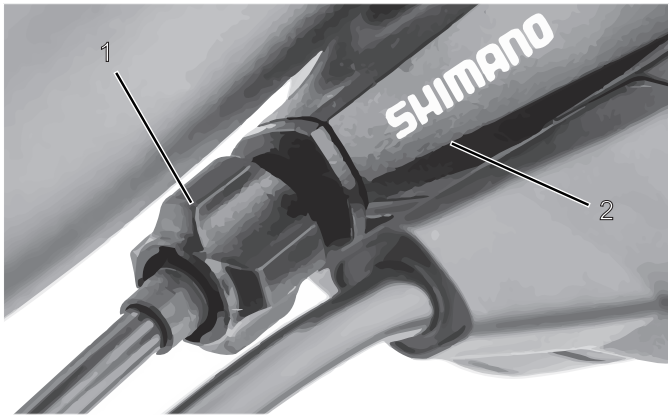


Figure 62: **Adjusting sleeve (1) for the single-cable cable-operated gear shift with gear shift housing (2), example**

8.4.5.2 Cable-operated gear shift, dual-cable (Alternative version)

- ▶ For a smooth gear shift, set the adjusting sleeves underneath the chain stay on the frame.
- ▶ The shift cable has play of approximately 1 mm when it is pulled out gently.

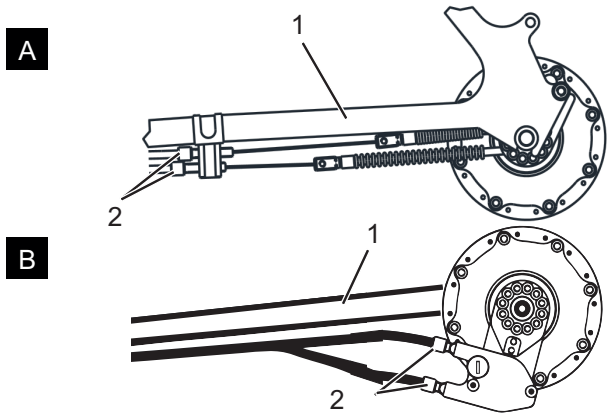


Figure 63: **Adjusting sleeves (2) on two alternative versions (A and B) of a dual-cable cable-operated gear shift on the chain stay (1)**

8.4.5.3 Cable-operated twist grip, dual-cable (Alternative version)

▶ For a smooth gear shift, set the adjusting sleeves on the gear shift housing.

⇨ There is noticeable play of around 2 - 5 mm (1/2 gear) when twisting the twist grip.

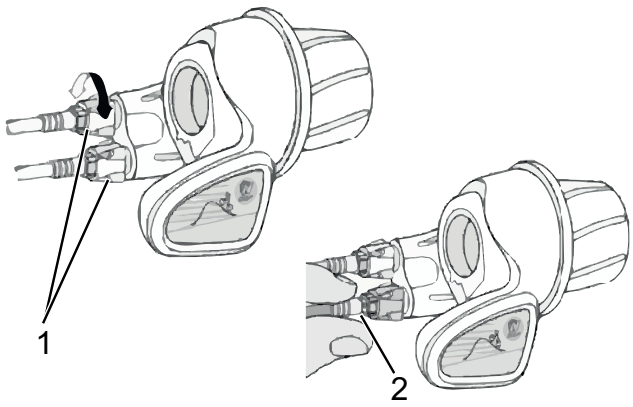


Figure 64: **Twist grip with adjusting sleeves (1) and play of the gear shift (2)**

8.4.6 Offsetting brake lining wear

8.4.6.1 Hydraulically operated rim brake (Alternative equipment)

The *setting bolt* on the *brake lever* of the hydraulic rim brake is used to offset the brake lining wear. If the profile of the brake pads has a remaining depth of only 1 mm, the brake pads will need to be replaced.

▶ In order to reduce the free travel and offset the brake lining wear, screw the *setting bolt* in.

▶ To increase the free travel, screw the *setting bolt* out.

⇨ With the optimum setting the action point, i.e. the point at which the brake takes effect, is reached after 10 mm of empty travel.

Figure 65: **Brake lever (1) of the hydraulically operated rim brake with setting bolt (2)**

8.4.6.2 Cable-operated rim brake (Alternative equipment)

The *setting bolt* on the *brake lever* of the cable-operated rim brake is adjusted to offset the brake lining wear.

The free travel is the distance *brake lever* travels from the initial position until it reaches its action point, i.e. the point at which the brake takes effect.

▶ In order to reduce the free travel and offset the brake lining wear, screw the *setting bolt* out.

▶ To increase the free travel, screw the *setting bolt* in.

⇨ When the ideal setting has been made, the action point is reached after 10 mm of free travel.

Figure 66: **Brake lever (1), lock nut (2) and setting bolt (3) of the cable-operated rim brake**

8.4.6.3 Disk brake (Alternative equipment)

The brake pad wear on the disk brake does not require readjustment.

8.4.7 Replacing the lighting

Alternatively a 3 watt or 1.5 watt lighting system can be installed.

▶ Only use components of the respective power class for replacement.

8.4.8 Setting the lamp

▶ The *lamp* must be set so that its light beam meets the road 10 m in front of the bicycle.

8.4.9 Repair by the specialist dealer

Special knowledge and tools are required for many repairs. Only a HERCULES specialist dealer must carry out the following repairs, for instance:

- Replacing *tyres* and rims,
- Replacing the brake pads and brake linings,
- Replacing and tensioning the *chain*.

8.4.10 First aid for system messages

Fire and explosion due to faulty batteries

WARNING

The safety electronics on damaged or faulty batteries may fail. The residual voltage can cause a short circuit. The batteries may self-ignite and explode.

- ▶ Batteries with external damage must be removed from service immediately.
- ▶ Never allow damaged batteries to come into contact with water.
- ▶ If a battery is dropped or struck but shows no signs of external damage, remove the battery from service and observe it for at least 24 hours.
- ▶ Faulty batteries are hazardous goods. Dispose of faulty batteries properly and as quickly as possible.
- ▶ Store in a dry place until disposal. Never store in the vicinity of flammable substances.
- ▶ Never open or repair the battery.

The components of the drive system are checked constantly and automatically. If a fault is detected, the respective fault code appears on the *display*. The drive may be shut off automatically, depending on the type of fault.

8.4.10.1 First aid

If a fault message is displayed, run through the following actions:

- ▶ Make a note of the system message.
- ▶ Shut off and re-start the drive system.
- ▶ If the system message is still displayed, remove and then re-insert the battery.
- ▶ Re-start the drive system.

▶ If the system message is still displayed, contact the HERCULES specialist dealer.

8.4.10.2 Specific fault eradication

▶ Make a note of the system message.

Fault	Remedy
LOW BAT	▶ Replace the internal display battery. Contact the HERCULES specialist dealer.
540, 604, 605	The bicycle is outside the permitted temperature range. ▶ Switch off the bicycle. ▶ Allow the system components to cool down or warm up. ▶ Re-start the drive system.
430	▶ Charge the internal display battery.
410, 418	▶ Check whether the keys are jammed, e.g. because dirt has got into them. ▶ Clean the keys as necessary.
460, 550	▶ Disconnect the consumer from the USB port. ▶ Re-start the drive system.
592	▶ Insert a compatible display. ▶ Re-start the drive system.
606	▶ Check the cabling. ▶ Re-start the drive system.

Table 29: **Fault eradication using the code**

▶ If the system message is still displayed, contact the HERCULES specialist dealer

8.4.3 The electric drive system of drive system does not start up

If the display and/or the drive system do not start up, proceed as follows:

- ▶ Check whether the battery is switched on. If not, start the battery.
- ⇨ If the LEDs of the charge status indicator do not light up, contact the HERCULES specialist dealer.
- ▶ If the LEDs of the charge status indicator light up, but the drive system does not start up, remove the battery.
- ▶ Insert the battery.
- ▶ Start the drive system.
- ▶ If the drive system does not start up, remove the battery.
- ▶ Clean all the contacts with a soft cloth.
- ▶ Insert the battery.
- ▶ Start the drive system.
- ▶ If the drive system does not start up, remove the battery.
- ▶ Fully charge the battery.
- ▶ Insert the battery.
- ▶ Start the drive system.
- ▶ If the drive system does not start up, remove the display.
- ▶ Fasten the display.
- ▶ Start the drive system.
- ▶ If the drive system does not start up, contact the HERCULES specialist dealer.

8.5 Accessories

For bicycles without a kickstand we recommend a parking stand into which either the front or rear wheel can be inserted securely. The following accessories are recommended:

Description	*Article number*
Protective cover for electrical components	080-41000 ff
Panniers system components*	080-40946
Rear wheel basket system components*	051-20603
Bicycle box system components*	080-40947
Parking stand universal stand	XX-TWO14B

Table 30: **Recommended accessories**

*System components are matched to the pannier rack and provide sufficient stability due to special transmission of force.

8.5.1 Child seat

CAUTION

Crash caused by improper handling

When using child seats, the riding properties and the stability of the bicycle change considerably. This can cause a loss of control, a crash and injuries.

- ▶ You should practice how to use the child seat safely and reliably before using the bicycle in public spaces.

CAUTION

Risk of crushing due to exposed springs

The child may crush his/her fingers on exposed springs or open mechanical parts of the saddle or the seat post.

- ▶ Never install saddles with exposed springs if a child seat is being used.
- ▶ Never install seat posts with suspension with open mechanical parts or exposed springs if a child seat is being used

NOTICE

- ▶ Observe the legal regulations on the use of child seats.
- ▶ Observe the operating and safety notes for the child seat system.
- ▶ Never exceed the total weight of the bicycle.

The HERCULES specialist dealer will advise you on the choice of right child seat system for the child and the bicycle. The scope of delivery of commercially available child seats does not usually contain any of the material which is required to adapt the bicycle to the child seat.

Moreover, knowledge, skills and tools which a technical layperson does not have, may be required.

Therefore, the initial installation of a child seat must be performed by the HERCULES specialist dealer in order to maintain operational and product safety. When installing a child seat, the HERCULES specialist dealer makes sure that the seat and the fastening mechanism for the seat suit the bicycle, that all components are installed and firmly fastened, that shift cables, brake cables, hydraulic and electrical cables are adjusted as necessary, that the freedom of movement of the rider is not restricted, and the permitted total weight of the bicycle is not exceeded.

The HERCULES specialist dealer provides instruction on how to handle the bicycle and the child seat.

8.5.2 Bicycle trailer

CAUTION

Crash caused by brake failure

The brake may not work sufficiently if there is an excessive trailer load. The long braking distance can cause a crash or an accident and injuries.

- ▶ Never exceed the specified trailer load.

NOTICE

- ▶ The operating and safety notes for the trailer system must be observed.
- ▶ The legal regulations on use of bicycle trailers must be observed.
- ▶ Only use type approved coupling systems.

A bicycle which is approved for towing a trailer is equipped with the respective information sign. Only bicycle trailers with a support load and total mass which do not exceed the permitted values, must be used.

The HERCULES specialist dealer will advise you on the choice of right trailer system for the bicycle. The scope of delivery of commercially available bicycle trailers does not usually contain any of the material which is required to adapt the bicycle to the trailer. Moreover, knowledge, skills and tools which a technical layperson does not have, may be required.

Therefore, the initial installation of a trailer must be performed by the HERCULES specialist dealer in order to maintain operational and product safety.

9 Recycling and disposal

WARNING

Risk of fire and explosion

The safety electronics on damaged or faulty batteries may fail. The residual voltage can cause a short circuit. The batteries may self-ignite and explode.

- ▶ Remove batteries with external damage from service immediately and never charge them.
- ▶ If the battery becomes deformed or begins to smoke, keep at a safe distance, disconnect the power supply at the socket, and notify the fire service immediately.
- ▶ Never extinguish damaged batteries with water or allow them to come into contact with water.
- ▶ Faulty batteries are hazardous goods. Dispose of faulty batteries properly and as quickly as possible.
- ▶ Store in a dry place until disposal. Never store in the vicinity of flammable substances.
- ▶ Never open or repair the battery.

CAUTION

Chemical burns to the skin and eyes

Liquids and vapours may leak from damaged or faulty batteries. They can irritate the airways and cause burns.

- ▶ Avoid contact with leaked liquids.
- ▶ Immediately consult a doctor in case of contact with the eyes or any discomfort.
- ▶ In case of contact with the skin, rinse off immediately with water.
- ▶ Ventilate the room well.

The bicycle, the battery, the display and the charger are recyclable materials. They have to be disposed of separate from the domestic waste in accordance with the valid legal regulations, and recycled.

Separate collection and recycling saves reserves of raw materials and ensures that all the regulations for protection of health and the environment are adhered to when recycling the product and/or the battery.

- ▶ Never dismantle the bicycle, the battery or the charger for disposal.
- ▶ The bicycle, the display, the unopened and undamaged battery and the charger can be returned to any HERCULES specialist dealer free of charge. Depending on the region, further disposal options may be available.
- ▶ Store the individual parts of the decommissioned bicycle in a dry place, free from frost, where they are protected from direct sunlight.

10 Translation of the original EC declaration of conformity

Translation of the original EC declaration of conformity

The manufacturer:

HERCULES GMBH
Longericher Straße 2
50739 Köln

hereby declares that the electrically power assisted cycle

Types 18-P-0001, 18-P-0002, 18-P-0003, 18-P-0004, 18-P-0005, 18-P-0006, 18-P-0007, 18-Q-0072, 18-Q-0073, 18-Q-0074,18-Q-0081, 18-Q-0082, 18-Q-0083, 18-Q-0084, 18-Q-0085, 18-Q-0099, 18-Q-0100, 18-Q-0104, 18-R-0006, 18-R-0007, 18-R-0008, 18-R-0009, 18-X-0002, 18-X-0004, 18-Y-0001, 18-Y-0004, 18-Y-0007, 18-Y-0009, 18-Y-0012,

year of manufacture 2017 and year of manufacture 2018,

comply with all applicable requirements of ***Machinery Directive 2006/42/EC***. Furthermore, the electrically power assisted cycles comply with all applicable basic requirements of ***Electromagnetic Compatibility Directive 2014/30/EU***.

The following standards were applied: ***EN ISO 12100:2010*** Safety of Machinery – General principles for design – Risk assessment and risk reduction, ***EN ISO 4210-2:2015***, Cycles – Safety requirements for bicycles – Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles, ***EN 15194:2009+A1:2011***, Cycles – Electrically power assisted cycles – EPAC bicycles, ***EN 11243:2016***, Cycles – Luggage carriers for bicycles – Requirements and test methods.

Mr. Harald Guoth Dipl.-Ing. (FH) (Quality Management Officer, Compliance Officer),
c/o HERCULES GMBH, Longericher Str. 2, 50739 Köln

is authorised to compile the technical documentation.

CE

Cologne, 27.09.2017

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Place, date and signature

Georg Honkomp

-Managing Director-

11 Table of figures

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YOUR HERCULES SPECIALIST DEALER