HERCULES

IMPORTANT
READ CAREFULLY BEFORE USE
KEEP SAFE FOR LATER REFERENCE

OPERATING INSTRUCTIONS

EN

BICYCLES

Avanos • Cargo City 3-G • Pippa • Robo • Sonic • Spyder
Tessano • Tourer • Uno • Valencia • Versa • Viverty

18-D-0001 | 18-D-0002 | 18-D-0003 | 18-D-0004 | 18-D-0005 | 18-D-0006 | 18-D-0007 | 18-D-0008 | 18-D-0009
18-D-0010 | 18-D-0011 | 18-D-0012 | 18-D-0013 | 18-D-0014 | 18-D-0015 | 18-D-0016 | 18-D-0017 | 18-D-0018
18-D-0019 | 18-D-0020 | 18-D-0021 | 18-D-0022 | 18-D-0023 | 18-D-0024 | 18-D-0025 | 18-D-0026 | 18-D-0027
18-D-0028 | 18-D-0029 | 18-D-0030 | 18-D-0031 | 18-D-0032 | 18-D-0035 | 18-D-0036 | 18-D-0049 | 18-D-0050
18-D-0051 | 18-D-0052 | 18-D-0053 | 18-D-0054 | 18-D-0055 | 18-D-0056 | 18-D-0057 | 18-D-0058 | 18-D-0059
18-D-0060 | 18-K-0002 | 18-L-0001 | 18-L-0003 | 18-M-0001 | 18-M-0002 | 18-M-0003 | 18-M-0004 | 18-M-0005
18-M-0006 | 18-M-0007 | 18-M-0008 | 18-M-0009 | 18-M-0010 | 18-M-0011 | 18-M-0012 | 18-M-0013 | 18-M-0014
18-M-0016 | 18-M-0017 | 18-M-0018 | 18-M-0019 | 18-M-0020

034-11461 • 1.0 • 29.01.2018

Data sheet

Surname, first name of the purchaser:

Date of purchase:

Model:

Frame number:

Type number:

Tyre size:

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

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
Storage temperature	5 °C - 25 °C
Operation temperature	5 °C - 35 °C
Working environment temperature	15 °C - 25 °C

Table 1: **Bicycle technical data**

Tightening torque

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

Table 2: **Tightening torque values**
***if there is no other data on the component**

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:

- EN ISO 4210-2:2015, Cycles – Safety requirements for bicycles – Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles,
- EN 11243:2016, Cycles – Luggage carriers for bicycles – Requirements and test methods,
- EN 82079-1:2012, Preparation of instructions for use – Structuring, content and presentation – Part 1: General principles and detailed requirements,
- EN ISO 17100:2016-05, Translation Services – Requirements for translation service.

2.3 Other valid documents

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

No other information is also applicable.

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 Identifying

2.5.1 Operating instructions

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	034-11461_1.0_29.01.2018

Table 3: **Identification number of the operating instructions**

2.5.2 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 no.	*Model*	*Bicycle type*
18-D-0001	Tessano Pro	City and trekking bicycle
18-D-0002	Tessano Pro	City and trekking bicycle
18-D-0003	Tessano Comp	City and trekking bicycle
18-D-0004	Tessano Comp	City and trekking bicycle
18-D-0005	Tessano Sport	City and trekking bicycle
18-D-0006	Tessano Sport	City and trekking bicycle
18-D-0007	Tessano 8	City and trekking bicycle
18-D-0008	Tessano 8	City and trekking bicycle
18-D-0009	Avanos Pro	City and trekking bicycle
18-D-0010	Avanos Pro	City and trekking bicycle
18-D-0011	Avanos COMP	City and trekking bicycle
18-D-0012	Avanos COMP	City and trekking bicycle
18-D-0013	Avanos 24	City and trekking bicycle

Table 4: **Type number, model and bicycle type categorisation**

Type no.	*Model*	*Bicycle type*
18-D-0014	Avanos 24	City and trekking bicycle
18-D-0015	Avanos 24	City and trekking bicycle
18-D-0016	Tourer 24 Sport	City and trekking bicycle
18-D-0017	Tourer 24 Sport	City and trekking bicycle
18-D-0018	Tourer 24 Sport	City and trekking bicycle
18-D-0019	Tourer 21	City and trekking bicycle
18-D-0020	Tourer 21	City and trekking bicycle
18-D-0021	Tourer 21	City and trekking bicycle
18-D-0022	Valencia R8 HS	City and trekking bicycle
18-D-0023	Valencia R8 HS	City and trekking bicycle
18-D-0024	Valencia R8 HS	City and trekking bicycle
18-D-0025	Valencia R7	City and trekking bicycle
18-D-0026	Valencia R7	City and trekking bicycle
18-D-0027	Valencia R7	City and trekking bicycle
18-D-0028	Valencia R7	City and trekking bicycle
18-D-0029	Uno R7	City and trekking bicycle
18-D-0030	Uno R7	City and trekking bicycle
18-D-0031	Uno R3	City and trekking bicycle
18-D-0032	Uno R3	City and trekking bicycle
18-D-0035	Viverty R7	City and trekking bicycle
18-D-0036	Viverty F7	City and trekking bicycle
18-D-0049	Spyder Street Pro	City and trekking bicycle
18-D-0050	Spyder Street Pro	City and trekking bicycle
18-D-0051	Spyder Pro	City and trekking bicycle
18-D-0052	Spyder Pro	City and trekking bicycle
18-D-0053	Spyder Street Comp	City and trekking bicycle
18-D-0054	Spyder Street Comp	City and trekking bicycle
18-D-0055	Spyder Comp	City and trekking bicycle

Table 4: **Type number, model and bicycle type categorisation**

Type no.	*Model*	*Bicycle type*
18-D-0056	Spyder Comp	City and trekking bicycle
18-D-0057	Spyder Street	City and trekking bicycle
18-D-0058	Spyder Street	City and trekking bicycle
18-D-0059	Spyder	City and trekking bicycle
18-D-0060	Spyder	City and trekking bicycle
18-K-0002	Cargo City 3-G	Carrier bicycle
18-L-0001	Versa R7	Folding bicycle
18-L-0003	Versa 7	Folding bicycle
18-M-0001	Sonic Disc 24	Cycle for children and young adults
18-M-0002	Sonic Disc 24	Cycle for children and young adults
18-M-0003	Sonic 21	Cycle for children and young adults
18-M-0004	Sonic 21	Cycle for children and young adults
18-M-0005	Sonic 21	Cycle for children and young adults
18-M-0006	Sonic 21	Cycle for children and young adults
18-M-0007	Sonic 21 Offroad	Cycle for children and young adults
18-M-0008	Sonic 7	Cycle for children and young adults
18-M-0009	Sonic 7 Offroad	Cycle for children and young adults
18-M-0010	Robo R3	Cycle for children and young adults
18-M-0011	Robo R3	Cycle for children and young adults
18-M-0012	Pippa R7	Cycle for children and young adults
18-M-0013	Pippa R7	Cycle for children and young adults
18-M-0014	Pippa R7	Cycle for children and young adults
18-M-0016	Pippa R7	Cycle for children and young adults
18-M-0017	Pippa R3	Cycle for children and young adults
18-M-0018	Pippa R3	Cycle for children and young adults
18-M-0019	Pippa R3	Cycle for children and young adults
18-M-0020	Sonic 7	Cycle for children and young adults

Table 4: **Type number, model and bicycle type categorisation**

2.6 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.

2.6.1 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 is instructed in person on the functions of the bicycle, at the latest when the vehicle 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.

2.6.2 Basic safety notes

These operating instructions have a chapter with general safety notes [▷ *Chapter 3, page 18*]. The chapter stands out because of its grey background.

2.6.3 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:

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

Table 5: **Meanings of the signal words**

2.6.4 Safety markings

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

	General warning
	Adhere to the instructions for use

Table 6: **Safety markings on the product**

2.7 For your information

2.7.1 Instructions for actions

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

✓ Requirements (optional)

▶ Instruction for action

⇨ Result of the action (optional)

2.7.2 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 7: **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 8: **Bicycle type**

2.7.3 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 [▷ *Table 7, page 15*]. 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 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 9: **Conventions**

2.8 Type plate

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

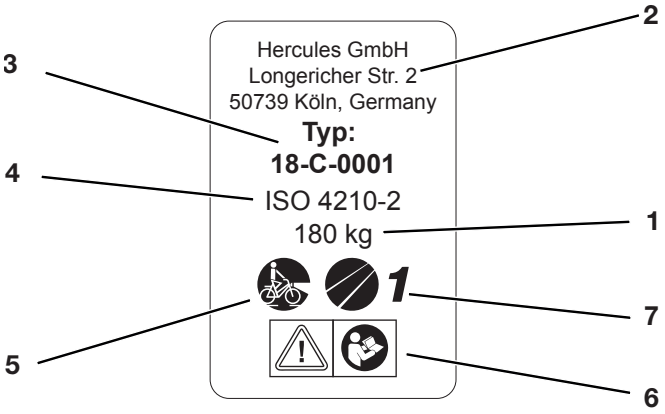


Figure 1: **Type plate, example**

1 Permitted total weight
2 Manufacturer
3 Type number
4 Bicycle standard
5 *Bicycle type*
6 *Safety notes*
7 *Area of use*

3 Safety

3.1 Requirements for the rider

The physical and mental abilities of the rider must be sufficient for riding on public roads. The legal guardians hold sole responsibility for determining whether minors are suitable to use the bicycle.

3.2 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.

3.3 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 *lighting equipment* 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 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.

3.3.3 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.

3.3.4 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.

3.4 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 Duty of care

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

3.5.1 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.

3.5.2 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

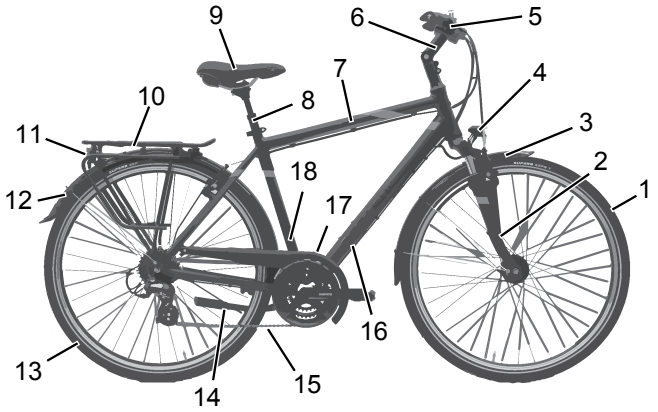


Figure 2: **Bicycle, viewed from the right, example of Solero SL**

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

4.2 Handlebars

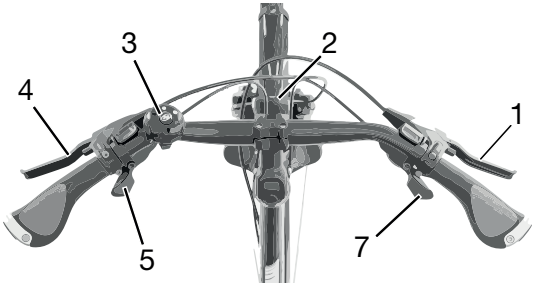


Figure 3: **Detailed view of bicycle from rider position, example 1**

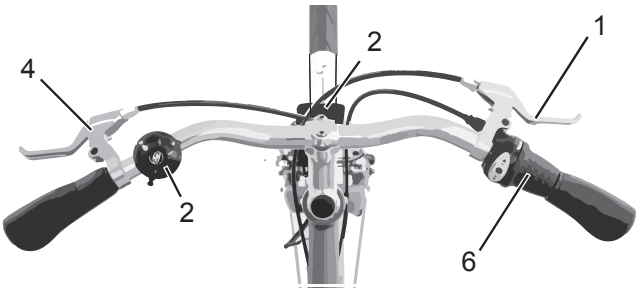


Figure 4: **Detailed view of bicycle from rider position, example 2**

1 Front brake lever
2 Bell
3 Lamp
4 Front brake lever
5 Shifter
6 Gear shift twist grip
7 Shifter

4.3 Wheel and fork

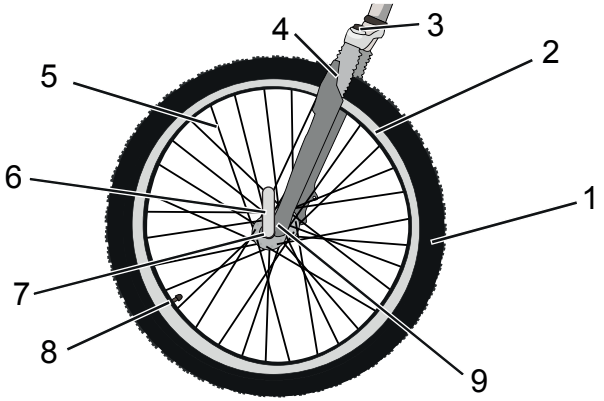


Figure 5: **Components of the wheel, example of front wheel**

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

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* or a *Presta 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 6: **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 the 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.

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)

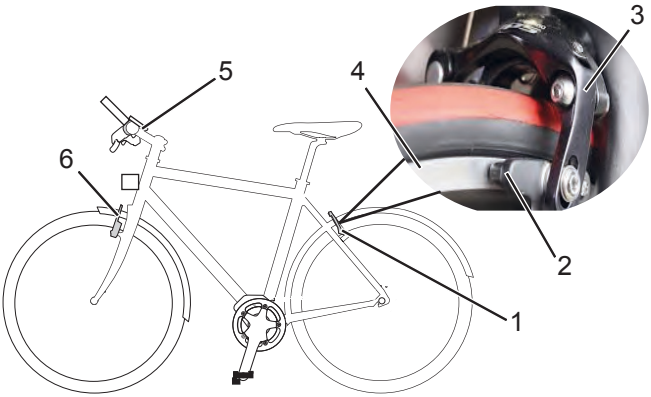


Figure 7: **Components of the rim brake with details, example**

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)

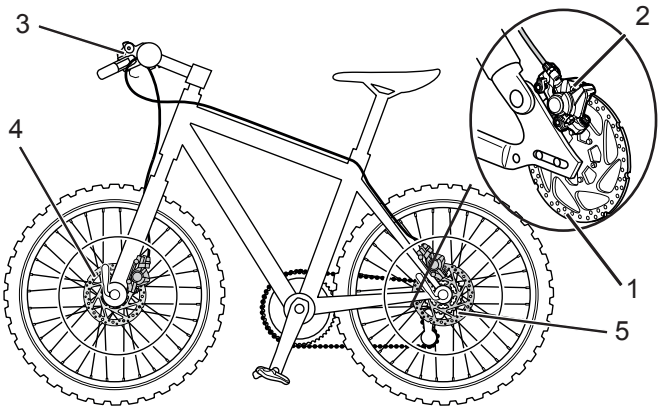


Figure 9: **Bicycle brake system with a disk brake, example**

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 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.

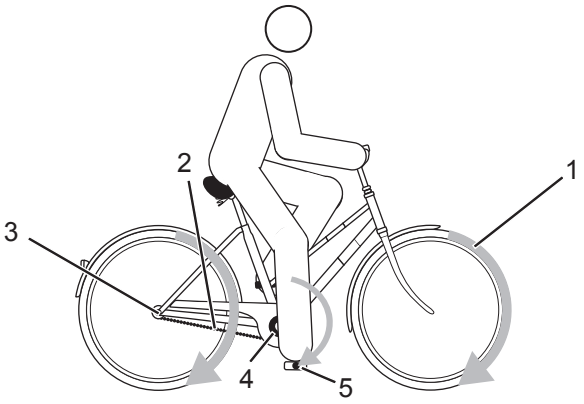


Figure 11: **Diagram of drive system**

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

4.6 Running light

The running light includes the *lamp* and the rear light. The hub dynamo supplies both lamps with current.

5 Transportation, storage and assembly

5.1 Transportation

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 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.

5.2 Storing

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 in a dry and clean place.

5.2.1 Break in operation

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

5.2.1.1 Preparing a break in operation

✓ 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 in a dry and clean environment.

5.3 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.
- ✓ 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

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 pedals and
- the operating instructions.

5.3.3 Commissioning

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:

▶ Install the *wheels* 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*.

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*, set the *shifter* and show the purchaser the settings.

▶ Instruct the user or rider how to use all the functions of the bicycle.

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.
- ▶ 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 s*addle*, *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.

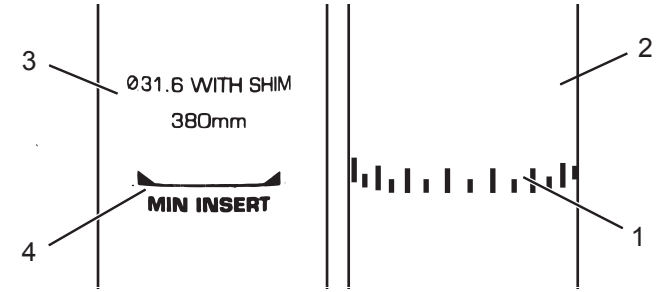


Figure 12: **Detailed view of the seat post, examples of the minimum insertion depth marking**

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.

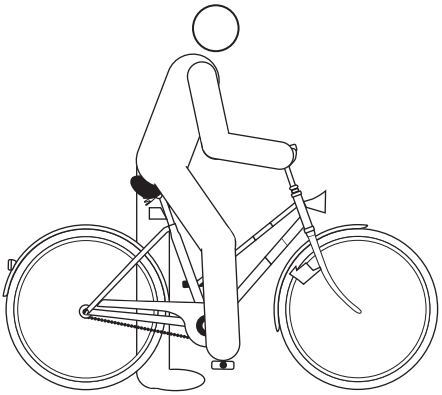


Figure 13: **Determining the saddle height**

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 14: **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 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 10: **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.

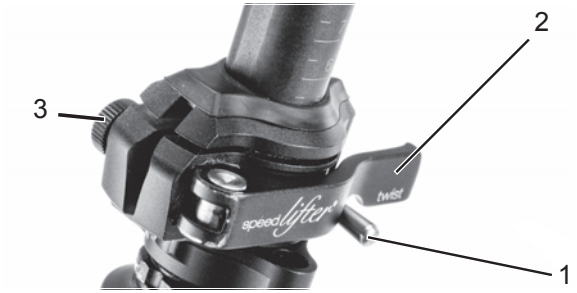


Figure 15: **Closed clamping lever (2) with knurled nut (3) and locking lever (1) on the stem**

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 16: **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

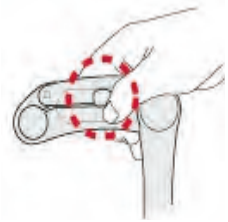
▶ If the *clamping lever on the handlebars* cannot be moved into its final position, screw out the *knurled nut*.

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

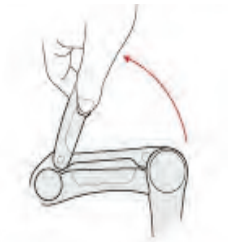
If the clamping force cannot be set, the HERCULES specialist dealer will need to check the quick release.

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.

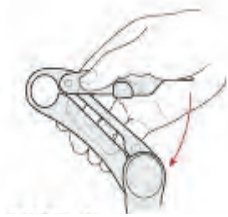


▶ Press the *locking button* on the left-hand side of the *stem*.



▶ 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 17: **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.

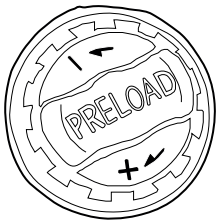


Figure 18: **Suspension fork setting wheel, example**

▶ 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

Figure 19: **Fork valve, example**

✓ 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.

▶ 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.

6.5.2 Setting the grip distance of the brake lever (Alternative equipment)

6.5.3 Hydraulically operated rim brake (Alternative version)

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

6.5.4 Hydraulically operated disk brake (Alternative version)

▶ Set the grip distance using the knurled screw on the brake lever.
⇨ The rider can use the brake lever comfortably.

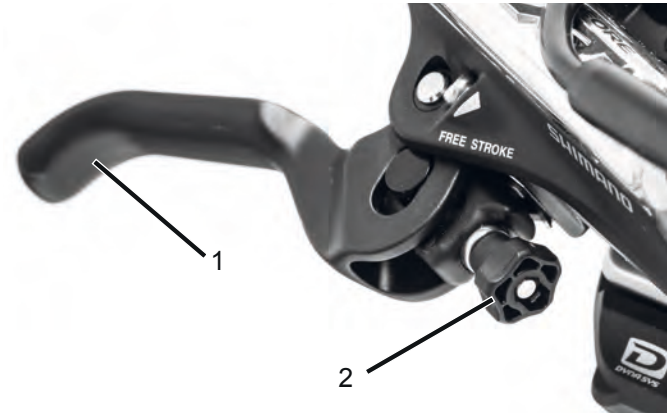


Figure 21: **Brake lever (1) with knurled screw (2)**

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.

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

▶ 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 a 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 Gear shift

The selection of the appropriate gear is a prerequisite for a physically comfortable ride. The ideal pedalling frequency is between 40 and 60 revolutions per minute.

▶ Select the appropriate gear with the *gear shift shifter*.

⇨ The gear shift switches the gear.

7.5 Using the running light

The running light is switched on and off on the lamp.

▶ Press on the deactivated switch.

⇨ The light lights up when riding.

▶ Press on the activated switched.

⇨ The light is switched off.

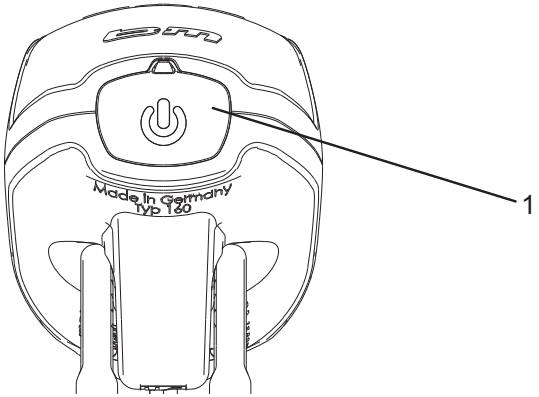


Figure 22: **Details of the lamp from the rear with switch (1), example**

7.6 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.

7.6.1 Using the brake

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

7.6.2 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.

7.7 Suspension and damping

7.7.1 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.

7.7.1.1 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 23: **Fork lock on the suspension head with locking lever (1), example**

7.7.1.2 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.

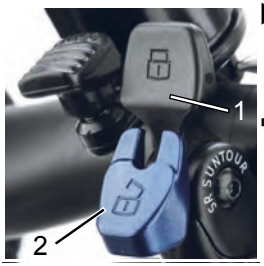
▶ To release the *front wheel suspension*, push the locking slider out of the pushed-out position.

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

Figure 24: **Fork lock on handlebars, version I, with locking slider (1)**

7.7.1.3 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.

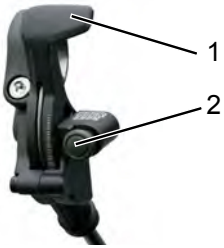
Figure 25: **Fork lock on handlebars, version II, with locking lever (1) and unlocking lever (2) (example)**

7.7.1.4 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 26: **Fork lock on handlebars, version III, with short lever (1) and long lever (2), example**

7.7.1.5 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 27: **Fork lock on handlebars, version IV, with locking lever (1) and unlocking knob (2)**

7.7.1.6 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 28: **Fork lock on handlebars, version V, with locking lever (1) and unlocking lever (2)**

7.8 Folding (Alternative equipment)

NOTICE

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

7.8.1 Folding the folding bicycle

The bicycle is folded in five steps.

- Use the *kickstand*.
- Fold the *pedal*.
- Fold the *stem.*
- Push in the *seat post*.
- Fold the *frame*.

7.8.1.1 Folding the pedal

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

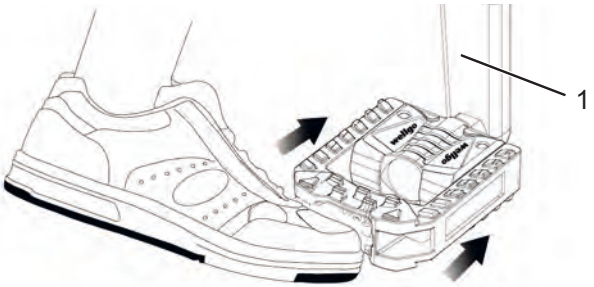


Figure 29: **Pushing the pedal against the pedal crank (1)**

▶ Fold the pedal against the pedal crank.

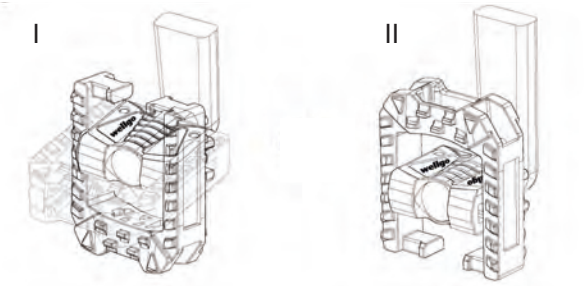


Figure 30: **Folding the pedal up (I) or down (II)**

7.8.2 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 31: **Opened clamping lever on the stem quick release (3) on the stem (2), version I, with locking lever on the stem (1)**

7.8.2.1 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 32: **Stem, version II with clamping lever on the stem quick release (1) and unlocking knob (2)**

7.8.2.2 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*.

7.8.2.3 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 33: **Frame, with closed frame clamping lever (1) and open frame locking lever (2)**

7.8.3 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 five steps.

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

7.8.3.1 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 34: **Frame, with closed frame clamping lever (1) and closed frame locking lever (2)**

7.8.3.2 Folding out the pedal

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

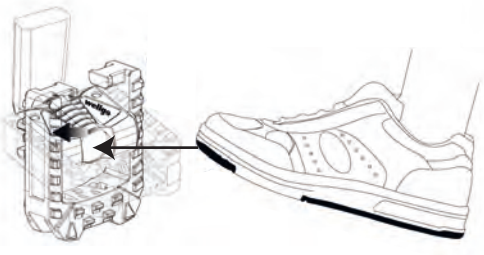


Figure 35: **Pushing the pedal against the pedal crank (1)**

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

Figure 36: **Folding up the pedal**

8 Maintenance

Cleaning check list

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

Maintenance check list

☐	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

All servicing measures must be carried out regularly [▷ *Check list, page 70*]. Servicing can be performed by the user and rider. In case of any doubt, consult the HERCULES specialist dealer.

8.1.1 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.

NOTICE

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.

NOTICE

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.

8.1.2 Chain

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

8.2 Maintenance

The following maintenance measures must be carried out regularly [▷ *Check list, page 70*]. They can be carried out by the user and rider. In case of any doubt, consult the HERCULES specialist dealer.

8.2.1 Wheel

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

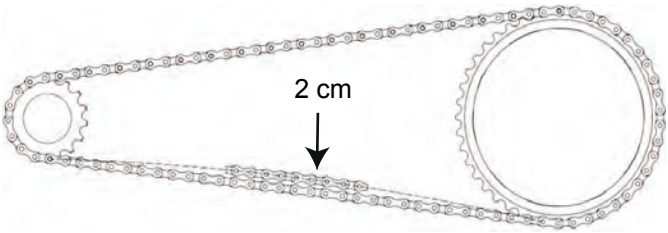


Figure 37: **Checking the chain and belt tension**

8.3 Service

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 70*]. 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 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

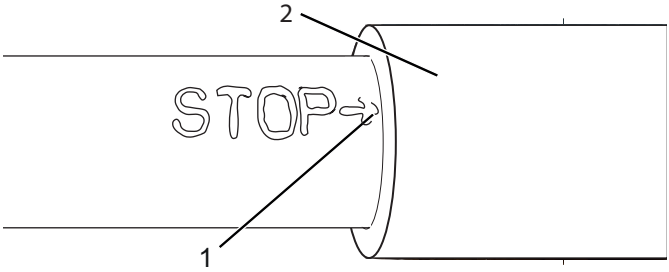


Figure 38: **STOP marking on the kickstand**

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.

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.

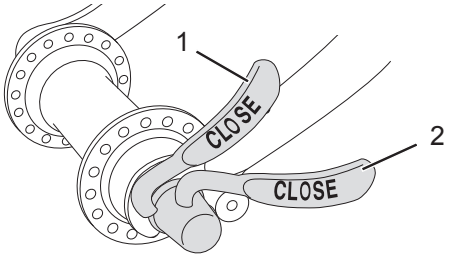


Figure 39: **Clamping lever in possible final position (1) or (2)**

⇨ 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.

8.4.4 Clamping the quick release

▶ Hold the open clamping lever. Fasten the setting nut 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.

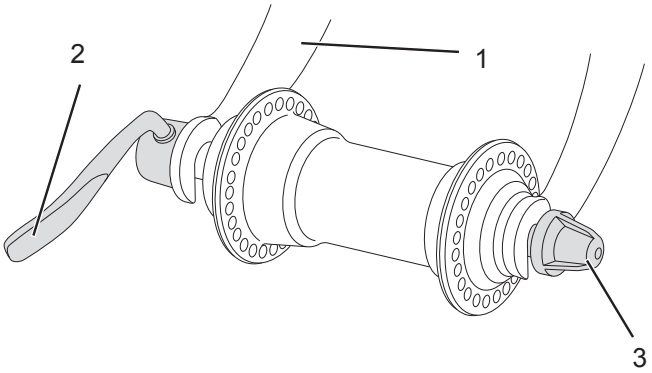


Figure 40: **Wheel quick release, version I, with clamping lever (2), fork (1) and setting nut (3)**

Checking and setting the clamping force of the quick releases

If the clamping lever cannot be moved into 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 clamping lever completely.

▶ Unfasten the setting nut a little.

▶ 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.

8.4.5 Adjusting the tyre pressure

8.4.5.1 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 41: **Dunlop valve with union nut (1) and rim nut (2)**

8.4.5.2 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 42: **Presta valve with valve insert (1), knurled nut (2) and rim nut (3)**

8.4.6 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.

8.4.6.1 Cable-operated gear shift, single-cable (Alternative equipment)

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

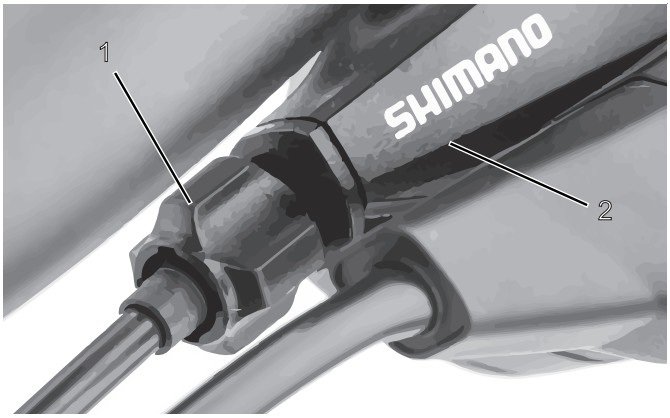


Figure 43: **Adjusting sleeve (1) for the single-cable cable-operated gear shift with gear shift housing (2), example**

8.4.6.2 Cable-operated gear shift, dual-cable (Alternative equipment)

- ▶ 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.

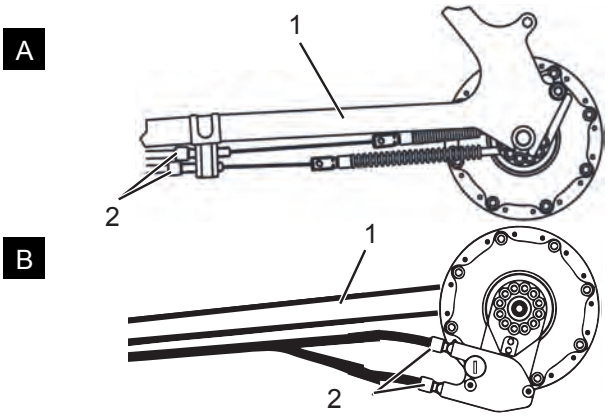


Figure 44: **Adjusting sleeves (2) on two alternative versions (A and B) of a dual-cable cable-operated gear shift on the chain stay (1)**

8.4.6.3 Cable-operated twist grip, dual-cable (Alternative equipment)

▶ 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.

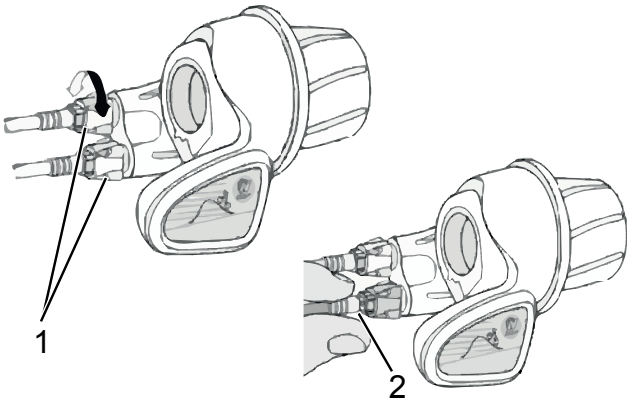


Figure 45: **Twist grip with adjusting sleeves (1) and play of the gear shift (2).**

8.4.7 Offsetting brake lining wear

8.4.7.1 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 46: **Brake lever (1) of the hydraulically operated rim brake with setting bolt (2)**

8.4.7.2 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 47: **Brake lever (1), lock nut (2) and setting bolt (3) of the cable-operated rim brake**

8.4.7.3 Disk brake (Alternative equipment)

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

8.4.8 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.

8.4.9 Setting the lamp

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

8.4.10 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*.

8.5 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 11: **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

The bicycle is reusable material. It has 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.

- ▶ Never dismantle the bicycle for disposal purposes.
- ▶ Any HERCULES specialist dealer will take back the bicycle free of charge. Depending on the region, further disposal options may be available.

10 Index

Text and images:
HERCULES GMBH
Longericher Straße 2
50739 Köln, Germany

Operating instructions: 034-11461_1.0_29.01.2018

www.hercules-bikes.de

HERCULES GMBH
Longericher Straße 2
D-50739 Köln

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

YOUR HERCULES SPECIALIST DEALER