



INSTRUCTION MANUAL
WARRANTY CARD

ENG





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CONTENTS:

1. Seller's duties	.5
2. Warranty card	.6
3. Maintenance and repair notes	.8
4. Warranty terms	.10
5. Bike structure	.12
6. Bicycle types	.14
7. Conditions of storage and use	.14
8. Introduction of the manual instruction	.15
9. Safety	.15
10. Bike fitting	.16
11. Handlebar	.17
12. Tyres	.19
13. Rims	.20
14. Wheels	.20
15. Spokes	.25
16. Brakes	.25
17. Drive	.27
18. Chain	.29
19. Pedals	.29
20. Amortization	.30
21. Carriers	.33
22. Folding bicycle	.33
23. Support wheels assembly	.34
24. Lighting	.35
25. Service and maintenance	.35
26. The tightening torques for the screw connections	.37

Dear customer, congratulation on your Romet bike purchase.
We wish you a pleasant exploit.

1. SELLER'S DUTIES

Seller has an obligation to deliver fully-fledged, suitable for further use, after assembly and regulation of the following pre-sales operations.

1. Unpacking the bike.
2. Proper pedal installation.
3. Proper handlebar installation and adjustment and adjustment of the saddle position towards the riding position.
4. Checking bike lights.
5. Brake and shifter regulation.
6. Installation of the wheels and centering if it is necessary.
7. Tyre pressure control.
8. Checking the bolt connection.

In case of purchase the bike in stationary shop, the above mentioned actions the seller should do.

During the internet sales, the seller is obligated to inform the buyer about the requirement of the first remitted maintenance in the first 7 days after purchase in the nearest authorized service centre (a list of service centre: **www.centrum.romet.pl**), subject to removing bicycle from guarantee.

The stationary shop seller and in case of internet sale the authorized service centre, makes the entry in the guarantee card (good name, manufacturer's number, sale date, stamp and the signature of the seller) and confirms preparing to riding.



2. WARRANTY CARD

GOOD DATA

Model code

Model

Color

Frame size

Manufacturer's
number

Quality control
number

Frame number

Sale date

USER DATA

First name

Name

Address

Phone / e-mail



SELLER DATA

Company name

Address

Phone / e-mail

I hereby give consent for my personal data to be entered and processed to the Arkus & Romet Group a limited company governed by private law database and their processing for marketing purposes.

The collected data may be disclosed on the basis of agreements entrusting data to authorized entities providing services to the Arkus & Romet Group a limited company governed by private law company . At the same time I have the right to view and amend my personal data and at any time I can request to cease processing them (removing them from the database).

Confirmation of becoming acquainted with manual instruction and warranty terms by the buyer.

Stamp

Seller confirmation of pre-sales operations and ride preparation.

Seller stamp

Date

Stamp

PROOF OF PURCHASE
(place to dip the receipt)



3. MAINTENANCE AND REPAIR NOTES

RECEPTION DATE	RELEASE DATE	SERVICE NOTES	SERVICE CENTER STAMP AND SIGN



RECEPTION DATE	RELEASE DATE	SERVICE NOTES	SERVICE CENTER STAMP AND SIGN



4. WARRANTY TERMS

1. The warranty provides good quality and proper functioning of a bike with this warranty card and it covers manufacture defects. The seller has an obligation to deliver fully-fledged, suitable for further use, after assembly operation by following the instructions.

2. The Buyer subject to removing bicycle from guarantee must ensure the seller about the requirement of the first maintenance and in case of internet sale the buyer should assign the first maintenance in the first 7 days after purchase. Service centre locations are on a website: www.centrum.romet.pl.

The fact of bike preparation, the seller/authorized service centre confirms with proper note in the warranty card.

Lack of realization the first maintenance or lack of realization confirmed on the warranty card cause the warranty will be no longer valid – in accordance with point 5 d) The warranty terms.

3. The buyer is obligated to realize maintenance and adjustment operations in accordance with bike manual instruction including maintenance, lubrication, tightening screw connections, adjustment mechanisms. The warranty does not cover the defects caused by improper, not in accordance with the manual instruction use, storage, improper operation and maintenance. To provide reliable exploitation, the guarantor recommends Romet service chemical.

4. The warranty does not cover:

a) The natural wear of components during the exploitation and their deregulation, especially damaged and deterioration of tires, chain stretch, dysregulated shifters and brakes, wear brake pads and disc brakes, wheel centering, wear on rim, lighting, lines, shields, plastic elements, crank mechanism, freewheel, cassettes, wheel hubs and fork slide bearings.

b) Defects as a consequence of the user negligence, especially the destruction of threads in cranks, caused by riding with loose pedals, recalibration of holes in cranks as a result of loosely support axis bolts, corrosion of galvanized and aluminum bikes

stored in damp rooms or outdoor for example on balconies, dislocation of raceway rudder bearings, corrosion of bearings and internal parts of the suspension fork as a result of washing bicycle with high-pressure devices, cracking of tires side surface as a result of riding with inappropriate pressure in tires or storage exposed to sunlight.

c) Damages caused by improper use and breaching the bike manual instruction supplied (for example extreme exploitation on sports competitions).

d) Front and rear shock absorbers defects (for some shock absorbers a separate guarantee is provided by the shock absorber manufacturer).

e) Mechanical damages as a result of overloads or accidents in particular rim deformation and related cracking spokes, bending or breaking of the rear shifter hook and spokes of rear wheel, bending the seat post, bending or breaking the seat frame, damages of crank drive sprockets and deformation of front shifter arising out of changing shifts under high loads, breach of frame geometry, wheel chock, fork blades, and fork crown damage.

5. The warranty is invalid in case of:

a) repair in non authorized service center

b) modification of the product in relation to an original design, substitution of components incompatible with the specification

c) lack of original warranty card and proof of purchase or when mentioned documents are illegible

d) lack of realization the first maintenance or lack of realization confirmed on the warranty card.

6. The warranty lasts on the area of Polish Republic. The warranty period is 24 months and reckoned from the date of purchase, confirmed in a warranty card by the point of sale.

7. Claims related to bike defects, should be reported to the dealer or authorized service center (authorized service centres locations on a website: www.centrum.romet.pl). The claimed bike should be delivered to the mentioned entities at the purchaser's expense, complete and clean.

The warranty does not include the purchaser's rights to reimbursement of expenses incurred in connection with the good defect, including transport costs to the nearest point of repair. In the case of bike shipping, it should also be ensured of a proper protection during transport, cause potential damages are not covered by the warranty.

8. Repair of a defective bike should be carried out within 21 days, and in case of ordering a defective component from the manufacturer or send back to the manufacturer for repair, 30 days. If the defect is complicated or there is a necessity of guarantor expert in terms of causes of damage, the deadline may be extended by the guarantor according to the circumstances, but no longer than 60 days.

9. The decision to replace the bike component to the new one, is undertaken by the manufacturer first and foremost in case of technical reasons the repair is not possible. In case of replacing defective bicycle frame to a new one, the guarantor reserves the right to the possibility of differences in color.

10. The buyer should ensure that the seller has made the appropriate entry in the warranty card (bicycle model, manufacturer's number, frame number, sell date, seller data, buyer data, appropriate entry for the proper preparation to ride, stamp and the signature of the seller). The warranty card must be filled out properly, otherwise it may be canceled and therefore the services under the warranty will not be provided.

11. The warranty does not preclude or limit the buyer's entitlements resulting from the warranty law for defects in sold good.

12. The guarantor of the quality of the goods is Arkus & Romet Group Sp z.o.o with headquarters in Podgródzie 32C, 39-200 Dębica, Poland.



5. BIKE STRUCTURE

- 1 Top tube
- 2 Handlebar stem
- 3 Handlebar
- 4 Brake lever
- 5 Shifter
- 6 Telescopic shock absorber
- 7 Tire
- 8 Brake rotor
- 9 Quick release axle clamping
- 10 Wheel hub
- 11 Front brake
- 12 Damper
- 13 Crank
- 14 Chainring
- 15 Chain
- 16 Rear derailleur
- 17 Freewheel / cassette
- 18 Rear brake
- 19 Rear disc brake
- 20 Chain stays
- 21 Seat stays
- 22 Seat post clamp
- 23 Saddle
- 24 Seat post





- 25 Front lighting
- 26 Front drum brake
- 27 Hub dynamo
- 28 Front mudguard
- 29 Pedal
- 30 Centre stand
- 31 Rear mudguard
- 32 Rear lighting
- 33 Carrier
- 34 Rear drum brake
- 35 Shock-absorber seat post
- 36 Front derailer
- 37 Chain guard
- 38 Bearing fork
- 39 Rear wheel hub
- 40 Down tube
- 41 Seat tube
- 42 Barend
- 43 Head tube
- 44 Rim
- 45 Wheel spoke



6. BICYCLE TYPES

The bicycle's function is dependent on the ride type and area for which it was designed.

MOUNTAIN BICYCLES

Designed for riding on the difficult terrain for example mountainous. Good handling, wide tires, shock absorber provides comfortable and safe ride on various types of surfaces. Bicycles designed for carrying loads not exceeding 110 kg (bicycle+biker+luggage). If bicycle weights 13 kg and we have 5 kg of luggage, the weight of the rider must not exceed 92 kg.

TREKKING BICYCLES

They are a compromise between the urban and mountain bicycle. Large 28-inch wheels with narrower tire than in a mountain bicycle provide that long distances are comfortable not only on asphalt roads but also on rigid pavements. Excellent cruiser bicycle. Bicycles designed for carrying loads not exceeding 110 kg (bicycle+biker+luggage). If bicycle weights 13 kg and we have 5 kg of luggage, the weight of the rider must not exceed 92 kg.

URBAN BICYCLES

Comfortable bicycles designed for travelling on city streets. Wide, curved handlebar, short frame and wide saddle provide safe and comfortable ride. Bicycles designed for carrying loads not exceeding 110 kg (bicycle+biker+luggage). If bicycle weights 13 kg and we have 5 kg of luggage, the weight of the rider must not exceed 92 kg.

CROSS BICYCLES

Just as trekking bicycles, cross bicycles are ideal for long journeys, as well as riding on asphalt roads but also on tightly compacted paths. Bicycles designed for carrying loads not exceeding 110 kg (bicycle+biker+luggage). If bicycle weights 13 kg and we have 5 kg of luggage, the weight of the rider must not exceed 92 kg.

ROAD BICYCLES

Light, sporty bicycles for high-speed use on asphalt roads. Bicycles designed for carrying loads not exceeding 110 kg (bicycle+biker+luggage). If bicycle weights 13 kg and we have 5 kg of luggage, the weight of the rider must not exceed 92 kg.

FOLDING BICYCLE

Designed to solve problems concerning transport and storage. Solid, all-around bike is an excellent offer for city dwellers and not only. Bicycles designed for carrying loads not exceeding 110 kg (bicycle+biker+luggage). If bicycle weights 13 kg and we have 5 kg of luggage, the weight of the rider must not exceed 92 kg.

CHILDREN BICYCLES (12" TO 24")

Designed for children, both learning to ride a bike and having the cycling experience. Solid, easy to use, convenient and safe. Bicycles 12" designed for carrying loads not exceeding 35 kg. If bicycle weights 10 kg, the weight of the rider must not exceed 25 kg. A similar method of calculating the maximum load for bicycles 16"-45 kg, 20"-55kg, 24"-65 kg.

7. CONDITIONS OF STORAGE AND USE

- The bicycle is used for recreational purposes, not for competitive and professional use.
- The bicycle is not designed to be used on sand, underwater, in the areas of high salinity like on the beach.
- The bicycle should be stored in a dry place, not exposed to acids and solvents, etc.

8. INTRODUCTION OF THE MANUAL INSTRUCTION

Before you start cycling, read this operating manual, it contains important information regarding safe riding, principles of the operation of bike mechanisms, proper operation and its maintenance. In case of any doubt, contact your seller or manufacturer.

8.1. Warning for users

Remember that buying a bike and deciding on the first ride, you assume the risk of personal injury and mechanical damage to the equipment. The user should know and apply the principles of safe riding, principles of proper use, storage and maintenance of the bike specified in the manual instruction. The manufacturer can not predict all the situations and circumstances that may occur while riding, so this manual does not contain rules of safe riding in any conditions. The sole responsibility for the safety during operation of the bicycle lies with the user.

8.2. Warning for parents / caregivers

The parent or a caregiver is responsible for the behaviour and safety of his child and that means the responsibility for fitting the bike, its technical condition, familiarizing your child with the instructions of safe bike usage and traffic rules. The parent should pay child's attention on warnings, the description of the functions of the bicycle and usage rules before the first ride.

WARNING

Make sure that your child always has an approved and properly fitted helmet while riding, that he knows the fundamentals of road safety, in particular – how to use the brakes safely (especially the foot brake).

Children under 12 years old should ride a bicycle only under parents or adult caregivers supervision. Bicycles produced by Arkus&Romet Group are not intended for children under 3 years old.

9. SAFETY

1. Prior to each ride the technical condition of a bicycle needs to be checked, especially:
 - check the tightness of nuts, screws and fasteners,
 - control the tires pressure, the tires condition, rims condition,
 - check wheel fastening, handlebar, handlebar stem, saddle, pedals,
 - evaluate the performance of the brakes, lighting, bell, grips condition,
 - check the proper installation of quick-release devices/front and rear wheel caliper and seatpost.
2. For the safety of bike riders during riding the manufacturer recommends the use of a protective helmet, which has a safety certificate.
3. Comply with the road traffic code. According to the traffic regulations, to ride on public roads the bicycle must be equipped with:
 - at least one front white or yellow light, shining steady or flash glow,
 - at least one rear red reflective light,
 - at least one rear light, shining steady or flash glow,
 - at least one, effective, working brake,
 - bell or other warning signal characterized by non-terrifying sound.
4. Before the first ride, familiarize with the operation of such control bike components like: brakes, derailleurs, shock absorbers. Good to choose a place away from traffic. First familiarize with a way of braking and the necessary force to stop the bicycle. Pressing brakes too hard will cause sudden wheels lock and a rider collapse or loss control of the bicycle. Pressing brakes too slowly can cause hitting an obstacle if will not slow down too soon. It is worth paying attention to how the shock absorbers react to different ways of braking and how they behave in diverse terrain. During first ride it is important to check the derailleurs work, keeping in mind that during shifting and immediately after shifting do not pedaling backwards, because it can cause chain jammed, fall, damage to the bicycle and injuries to the rider.
5. Avoid the direct contact with sharp chain elements in motion, rotating cranks or bike wheels while riding.



6. Clothes need to be seen on the road, not too loose, it is recommended to use glasses that will cover your eyes from impurities in the air. Sole of the shoes should be non-slip, properly laced, so the laces will not interfere with any moving part of bicycle.
7. Do not get on a bicycle after drinking alcohol or under the influence of drugs.
8. During cycling, do not use the headphones.
9. When cycling always should keep both hands on a handlebars.
10. Remember that riding in low visibility conditions is very dangerous. The visibility of cyclists and the other vehicles reduces on the road, the efficiency of brakes and tire grip as well. Special care should be taken in respect of the ride and selecting the appropriate bike lighting. Reflective lights can not replace a full bike lighting. riding at night, dawn, dusk or in other low visibility conditions without full lighting is dangerous and may cause an accident. It is recommended to wear the high visibility vest. It is suggested that children should never ride a bicycle in poor visibility conditions.
11. Be particularly careful while riding in the rain, cause it reduces the adhesion of tires, brake performance and visibility on the road.
12. Transporting a child in the bike seat, in the case of a bicycle equipped with bike saddle with springs, it is required to protect the saddle springs so kids can't get their fingers trapped.

10. BIKE FITTING

Proper bike fitting is a basic requirement for ensuring road safety, traction properties and convenience. When buying the bicycle consult with the seller whether the bike is suitable to your height, weight and riding conditions.

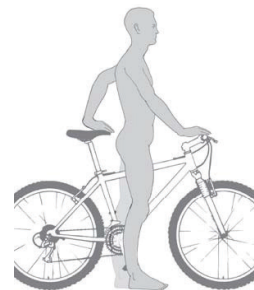
WARNING

Nor fitting the bike properly could lead to loss of control of the vehicle and may cause rider's injury.

Methods of choosing the correct size of bike:

Standing position

1. Bicycles with classic frame. Standing position is one of the basic methods of selecting the right bicycle size. In order to determine the correct frame height, stand on heels astride the bicycle in the middle of the distance between the saddle and the handlebar stem, wearing shoes in which you plan to ride. If your crotch touches the frame the bicycle is too big for you so you can safely ride on it. Road bike which you are not riding only on paved area should have the distance between the crotch and the frame minimum 5 cm. Cross bicycle used on unpaved roads minimum 7 cm and a mountain bicycle to ride on a difficult terrain 10 cm or more.



2. In the case of a bicycle with women's frame the size of a bicycle depends on the height at which you can pull out the saddle according to the method described below.

Saddle position

Setting the correct saddle position is extremely important in terms of comfort and safety while riding.

Saddle adjustment may occur in three directions:

1. Adjust up and down. To check the correct saddle height.
 - sit on the saddle
 - put your heel on the pedal
 - turn the crank so the pedal with the heel on it is located in the down position, and the crank arm will be



parallel to the seat tube.

In a proper riding position there should be a slight bend in your knee.

2. Front and rear adjusting. Saddle clamping bracket should be within the graduation on seat post bars, and in case of lack of the graduation – a central part of the seat post bars.
3. The adjustment of the saddle angle. It is optimal to set the saddle in a horizontal position, parallel to the ground.

Some bicycles are equipped with a clamp mounting of seat post. Clamp / quick-release device for seat works exactly like a clamp / quick-release device for wheel. The nut should be tightened by hand, so after pressing down, locking the lever, vertical or about axis movement of the seat post is prevented.

IMPORTANT

While setting the saddle, pay special attention to the maximum sliding of a seat post to not exceed the upper edge of the warning sign, the sign can not be seen. The minimum insertion depth of the seat post should be 8 cm. Properly tightened adjustment mechanisms and saddle attachment does not allow saddle movements in any direction.

WARNING

Too high position of the saddle can cause loss of control of the bicycle and consequently fall, personal injuries and equipment damages.

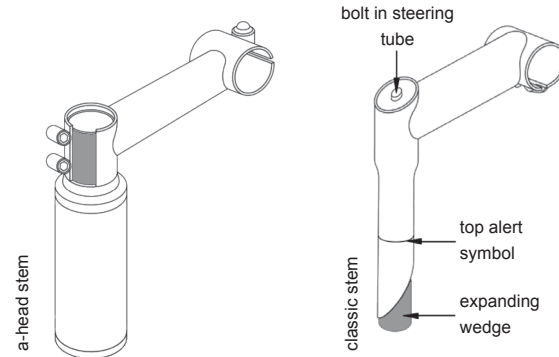
11. HANDLEBAR

Adjusting the handlebar properly provides comfort and safe riding. The high adjustment of a handlebar depends of the stem type used in the bicycle.

11.1. Used types of stems

1. Classic stem (with w wedge) – with height - adjustable handlebar. While setting the handlebar, pay special attention to the maximum sliding of a handlebar stem to not exceed the upper edge of the warning sign. The sign can not be seen above the rudders otherwise it may lead to bending, breaking the stem or damaging to the frame head, which can be noted as reason of loss of control of the bicycle and fall. To change the height of the stem, unscrew the fixing bolt in steering tube, adjust the stem in the desired position, then tighten the screw. Classic stem requires a fork with a shorter, threaded steerer tube. Classic stems with adjustable tilt angle may also be used, where we can set the optimal setting of a stem.

2. A-head stem – without the possibility of adjusting the height of the handlebar, requires a fork with a longer non-threaded steering tube.





In general in competitive and mountain bicycles applies a-head stem. However to urban, tourist, trekking bicycles classic brackets are preferred.

⚠ WARNING

The correction of height-adjustment of the handlebar stem, should be done by the seller/authorized service due to the fact that in some of the bikes transpire the change of stress of the bands mechanisms also in the front brake, requiring additional adjustment.

11.2. Handlebar bearings (rudders)

Rudders are designed to facilitate rotation of the fork (with wheel attached to it) against the frame, allowing a change of riding direction. The most important elements of the rudders are two bearings: one situated at the upper edge of the frame head (the tube through which the steering fork tube is passed, sometimes called the shaft) and one at the bottom edge. The steering set always equipped with an element responsible for clearing the clearances, so the fork works smoothly, without shaking and it is stabile. Rudders are equipped also with a tread, which setting on the lower end of the steerer tube fork.

Rudders should be tightened so that the fork rotates smoothly, easily without any clearances. If we press the front brake applying fingers of the other hand to rudders at the same time and move the bicycle forward and backward then we will be able to recognize any movement between the bearings and the handlebar stem or frame head. Handlebar steering bearings must be set lightly to allow easy rotation of the handlebar, and at the same time hard enough so there are no clearances. Bike placed in a tilted position should turn without touching the handlebar. Rudders twisted too tightly obstruct operation. So it is better to allow a little more clearance in rudders than twisting the bearings too tightly. Bearing balls are harder than tread and excessively squeezed may result in the appearance of tiny cavities, detectable during turning the handlebar and reducing the precision of control.

Threaded rudders (classic)

Element closely cooperating with turning rudders is threaded steerer fork, because the nuts on it are responsible for countering the entire set.

A characteristic feature of the classic rudders is the possibility of removing the handlebar stem without causing the clearance on rudders bearings. We may recognize them by the presence of two counterpunched nuts below the handlebar stem and the shape of the stem, which is inserted in the inside of steerer tube, and its installation is always done by the screw screwed from the top.

In case of rudders clearance you should:

- Loosen the top nut, while holding the upper tread
- Tighten the upper tread, to remove the clearance, and the fork could rotate smoothly and lightly
- Tighten the top nut while holding the upper tread.

Control that the fork rotates properly, that means smoothly and lightly.

Non threaded a-head rudders

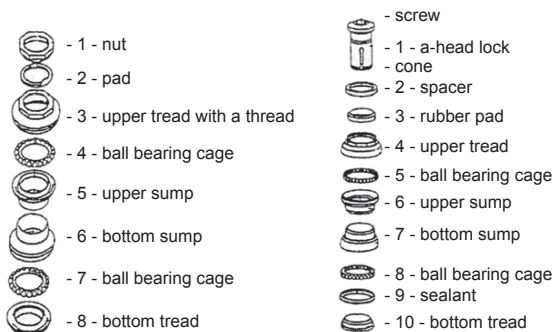
A-head rudders are the non-threaded system. Caps are hammered with a bushings to the inside of a frame, and the bearing after installation stays entirely outside the frame.

If adjustment is required you should follow the steps below:

- Loosen 2 allen screws tightening the stem.
- Unscrew the adjustment screw in lid.
- Tighten the handle of the front brake, do some small movements of the bike forward and backward. Displacements of the upper cap against the bottom (top-down), means that the rudders are loose.
- If the rudders do not rotate freely, to loosen them the wheel should solidly hit the ground.
- If there is a clearance , you should tighten the adjustment screw about a quarter-turn.
- Make sure that the rudders rotate freely, to do this it is necessary to lift the front wheel and tilt the bike to the side, the handlebar should freely turn aside.

- After setting the rudder bearings, set the stem in front and tighten the stem screws, (should tighten them alternately on half a turn each).

Control that the fork rotates correctly, that means smoothly and easily.



12. TYRES

12.1. Optimal tire pressure

To maintain the good condition of the tires, so that the ride is safe and comfortable, the tires should be inflated to the proper pressure. Typically, the recommended pressure is supplied directly on the tire sidewall. Pressure is supplied in different units, while most of tires pressure is given in bars (which approximately corresponds to the atmospheres). The second unit is PSI, typically shown on most of manometers.

For example, the tire label: 2.50 – 4.50 bar (35-65 PSI).

What means the minimum recommended pressure in tire is 2,5 atm/bar or 35 PSI, and the maximum allowable pressure is 4,5 atm or 65 PSI.

Conversion of the units, which can be found on the scales of the manometers:

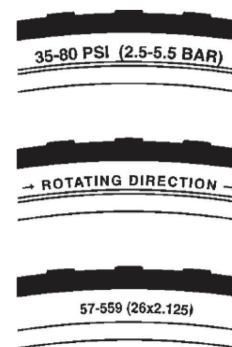
1 bar = 14,5 PSI, 1 bar = 1,02 technical atmosphere

Tires inflated to the pressure that is too high, wear out faster, are easier to puncture and the depreciation of the bicycle is weaker. Too low pressure causes uneven tread wear, increases the rolling resistance, increases the braking distance, moreover it is easier to puncture the inner tube by the compression. It is relevant to pump wheels using a pump equipped with a manometer. The tire pressure control should be performed at least one every two weeks or before every longer route.

Some tires have oneway tread, this means that they are designed to work better mounted to ride in only one direction. Direction of rotation of that wheel is indicated.

Tires should not show cracks, bulges and excessive tread wear. To maintain the good condition of the tires the following should be avoided:

- sudden stopping
- riding on under-inflated tires
- petroleum, oil, gas soiling
- long leaving a bike in places exposed to strong sunlight.



The tire label

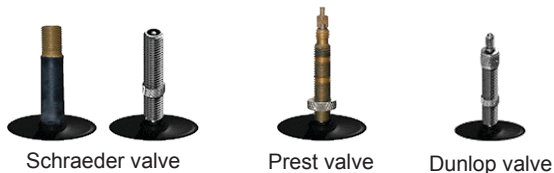


12.2. Inner tube valves

Schraeder valve (automotive or marked with a symbol AV) – the most popular valve used in bicycle inner tubes. Inner tubes with that valve can be pumped with an automotive pump and practically every bicycle pump. To deflate the inner tube, press the internal valve needle.

Prest valve (so-called italian, often denoted by the SV symbol) – due to the smallest diameter of the valves, often used in road and trekking bikes. Used in inner bicycle tubes as in inner tubeless rims. To inflate the inner tube use the pump with a Pres type end, should unscrew the nut blocking the valve machine. To release the air through the Prest valve, unscrew the nut blocking the valve machine and press it.

Dunlop valve (often denoted by the DV symbol) – classic bicycle valve. Inner tubes of that type are pumped with the same pump as the Prest valve. To deflate the inner tube, remove the inner inset.



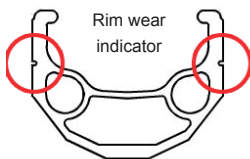
Schraeder valve

Prest valve

Dunlop valve

13. RIMS

Before using the bike, check every time the rims condition. During the operation, rims are subject to wear, especially when they are a part of the brake system (brakes V—brake). It is worth noting that the rims are centered, lift the bike and rotate front and rear wheel, whereas the distance between the rim and the braking pads enclosures, and in the case of discs brakes between the rim and the fork arm. Riding with skewed rim can lead to cracked wheel spokes and consequently locking the wheels and crash. Another thing is to control the rim wear in-



Rim wear indicator

dicators, located by the manufacturer on the outside of the rim. If the indicator is not visible or the rim has grooves, cracks that can be felt with finger, should be replaced immediately. Rims should be checked for contamination, in particular oil, grease, because their purity affects on the effectiveness of the rim brakes (V-brake).

14. WHEELS

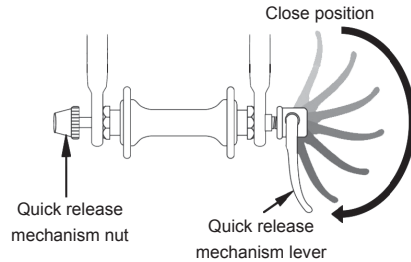
Properly adjusted wheel should rotate smoothly, without stops, perceptible looses. The wheel equipped with a hub dynamo can rotate with some resistance caused by the action of the magnets in dynamo. The wheels must be placed in the plane of symmetry of a frame and fork, where the gap between the rim and fork must be the same on both sides.

WARNING

Before every ride, check that bicycle wheels are correctly installed. Do not begin operating a bicycle with an improperly secured wheels. It is important to familiarize with the kind of mounting and the technique of assemble and disassemble of the wheels in bicycle. The wheels are mounted to the frame and fork by the nuts or quick-release devices.

14.1. Wheel quick release

Quick release installation as a element mounting wheel to the frame or fork starts by inserting it so the quick release lever was on the left side of the wheel and the spring with a smaller diameter to the inside, then on the other side of the hub insert a second spring also with a smaller diameter to the inside and tighten the nut. Springs move away the quick release nuts from the frame /shock absorber facilitating their tightening. While installing quick release properly do not turn the lever, leaving it in the open position (open), tighten the nut on the opposite side of the hub. Turning the nut clockwise while holding the lever in the same position increases the locking force. Closing (close) the lever should be held with noticeable resistance, using considerable force.



14.2. Quick release front wheel installation

- Turn the lever in open position (open).
- Adjust the fork in the forward direction and install the wheel as the wheel axis drop out into the fork.
- Hold with one hand the quick release mechanism lever and tighten the nut on the opposite end of the hub with the other until the lever turns to close position (close).
- If the bike is equipped with V-brake front brake, lock the brake clamps.
- Turn the wheel to make sure it does not rub against the brake pads, press the brake lever to check if the brake works properly.

14.3. Front wheel quick release removal

- If the bike is equipped with V-brake front brake, unlock the brake clamps.
- Turn the lever to open position (open).
- Lift the front wheel up and hit the upper part of a wheel with the hand, the wheel should fall out of fork.

14.4. Front wheel installation with nuts

- Adjust the fork in the forward direction and install the wheel between the fork as the wheel axis drop out into the fork, insert the pads (must be between the fork and the hub axle nut).
- Tighten the hub axle nuts (using a proper wrench).
- If the bike is equipped with V-brake front brake, lock the brake clamps.
- Turn the wheel to make sure it does not rub against the brake pads, press the brake lever to check if the brake works properly.

14.5. Front wheel removal with nuts

- If the bike is equipped with V-brake front brake, unlock the brake clamps.
- Using a proper wrench loosen the hub axle nuts, unscrew the nuts, remove the pads.
- Lift the front of bicycle up and hit the upper part of a wheel with the hand, the wheel should fall out of fork.

14.6. Rear wheel installation with nuts

- Change shift into the highest of the rear derailleur (the smallest sprocket).
- Pull the derailleur cover back, attach the chain to the smallest rear sprocket.
- Install the wheel on rear fork moving all the way up and back so the axis of the wheel drop out into the fork, insert the pads (must be between the fork and the hub axle nut).
- Tighten the hub axle nuts (using a proper wrench).
- If the bike is equipped with V-brake rear brake, lock the brake clamps.
- Turn the wheel to make sure it does not rub against the brake pads, press the brake lever to check if the brake works properly.

14.7. Rear wheel removal with nuts

- If the bike is equipped with V-brake rear brake, unlock the brake clamps.
- Change shift of the rear derailleur to the smallest rear sprocket.
- Loosen the hub nuts (using a proper wrench), remove the pads.
- Pull the derailleur cover back, hold in that position, lift the rear wheel up then push it forward and down until it drops out of the rear fork.



14.8. Rear wheel quick release installation

- Change shift to the highest of the rear derailleur (the smallest sprocket), turn the lever to the open position (open).
- Pull the derailleur cover back, attach the chain to the smallest rear sprocket.
- Install the wheel on rear fork moving all the way up and back so the axis of the wheel drop out into the fork, insert the pads (must be between the fork and the hub axle nut).
- Hold with one hand the quick release mechanism lever and tighten the nut on the opposite end of the hub with the other until the lever turns to close position (close). Closed lever should be parallel to the chain.
- If the bike is equipped with V-brake rear brake, lock the brake clamps.
- Turn the wheel to make sure it does not rub against the brake pads, press the brake lever to check if the brake works properly.

14.9. Rear wheel quick release removal

- If the bike is equipped with V-brake rear brake, unlock the brake clamps.
- Change shift of the rear derailleur to the smallest rear sprocket.
- Turn the lever to open position (open).
- Pull the derailleur cover back, hold in that position, lift the rear wheel up then push it forward and down until it drops out of the rear fork.

14.10. Rear wheel installation with a foot brake

- Attach the chain on a sprocket.
- Install the wheel on the rear fork and push it into the fork, set the proper hub axis pads (must be between the fork and the hub axle nut).
- Install a foot brake arm.
- Tighten the nuts (using a proper wrench) it is important that the wheel is placed in the bicycle axis of symmetry and the chain has the proper tension.
- Rotate the wheel to make sure it is properly seated.
- Check that the brake is working properly.

14.11. Rear wheel removal with a foot brake

- Remove foot brake arm.
- Loosen the hub nuts (using a proper wrench).
- Push the wheel forward and remove the chain from sprocket.
- Pull out the wheel from the rear fork.

14.12. Rear wheel installation with internal-gear hub

Shimano Nexus 3:

- Install the pads adjusting the proper alignment of the hub axle to the frame.
- Fasten the nuts
- Install a lever and clickbox cover.
- Tighten the brake

Shimano Nexus 7/8:

- Install the line on a holder.
- Install the adjusting pads.
- Tighten the nuts
- Tighten the brake

14.13. Installation and removal of the wheel with stiff axis

Regardless of whether we have a fork with an axis installed on nuts or the quick release, the removal procedure starts by loosening small screws on front or at the bottom of the fork. These squeeze the thread axis, so trying by force to unscrew the main axis without achieving the clearance in above-mentioned screws in the first place, damage to the tread is possible. After loosening the screws depending on solution that we apply we unscrew with a right key the axis or loosen the quick release and put up the axis. If after removing it from a thread it does not want to leave without resistance, should make some wheel moves (its hub) in the fork, so this will allow the hub dispensers to lay and the axis will come without resistance. During installation – we act exactly accordingly to the reverse order, remembering two things – to lubricate a slip-axis with a grease for pedals (which will prevent its distortion).

 **WARNING**

In case of necessity of removing the wheel with a disc brake, it is crucial to set the retaining element between the brake lining, because pressing the brake handle without the protection can lead to airlock the brake system.

14.14. Installation/Removal of a wheel with hub dynamo

Remember that in case of wheel with quick release, the release lever is in the left side, looking at the front of the bicycle.

The cable should be connected so that it isn't too loose or too strained during riding, for example while using a shock absorber, and at the same time fastened firmly to not get into spokes or other parts. During wheel removing, disconnect the lamp from the generator, remove the plug. Do not use the bicycle with unbuckled cable, it can caught in spokes. Pull the plug before loosening the quick release or nuts (depending on the used solution), and plugging the plug during disassembly should be held after wheel installation on the fork. After plugging the plug check if the lighting works properly.

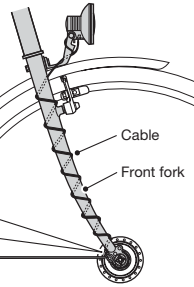
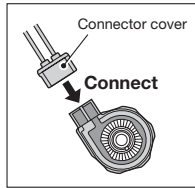


↑ Take off



Connector cover

↓ Connect



Cable

Front fork

Lamp wire

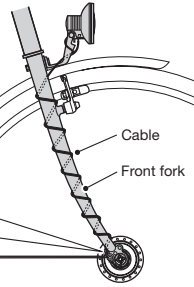
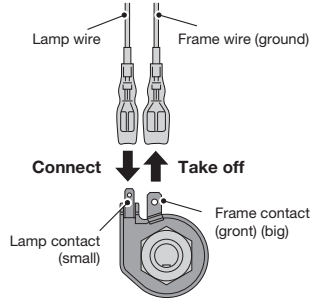
Frame wire (ground)

Connect ↓

↑ Take off

Lamp contact (small)

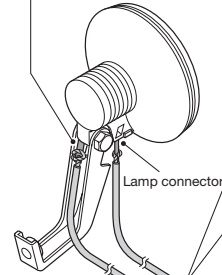
Frame contact (gront) (big)



Cable

Front fork

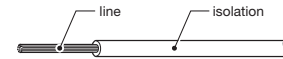
Frame clamp



Lamp connector

Warning:

- Be careful not to confuse the frame lines and the lamp lines. If the lines are connected incorrectly, the lamp will not light.
- Before connecting twist the lines around each other to stick together.
- Recommended line technical data.



Type	Braid
Line	Size (AWG) 22 Diameter about 0,8 mm
Isolation	Diameter 1,8-2 mm

About 16 mm

About 16 mm

Connector shield (grey)

Connector shield (black)

Warning:

- Orient in the right direction.



- Pressing down until you hear a click.

Warning:

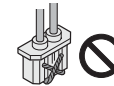
- Fold the lines and run them along grooves.

↓ Insert

Groove

↘ Bend

- Lines cannot touch each other.



Clamp hub

Lamp connector

Frame clamp

14.15. Removing hub bearings clearance

Should take place as soon as it is detected, otherwise the operation of the bicycle with excessive clearance will lead to damage to the hub. To remove the bearing clearance, you should tighten the cones of the hub in that way the wheel rotates smoothly, then lock it carefully not to change the position of the cones. If after installing the wheels it turns out that the wheels rotate with resistance, adjustment must be repeated. It is recommended due to complicated degree of activity, not to make it by yourself and assign it to the authorized service.

15. SPOKES

UWAGA

Loose spokes should always be tightened immediately and damaged or broken spokes must be replaced immediately. Risk of accident and damage!

Maintenance and repair of spokes (e.g. Tightening the spokes, replacing or centering the road wheel) may only be carried out by qualified personnel using the appropriate tools. Only in this way the proper functioning will be ensured. Risk of accident and damage!

The spokes connect the hub to the rim. The equal spokes tension is responsible for the rotary movement and stabilization of a road wheel. In process of time, the spokes may collapse. Then they shall be tensioned and centered.

16. BRAKES

An efficient braking system is the basis of cyclist safety, so before using the bicycle always check brakes for proper function, in particular:

- Adjustment of the brake levers, which should not touch the steering tube even with the lever pressed down to maximum.
- Tension of the brake cables, lines and covers condition which may not show signs of wear.
- Rims, brake pads and brake discs condition, which must be clean and show no signs

of significant wear.

16.1. Adjusting the position of the brake levers

Proper adjustment of brake levers can be achieved by adjusting the angle of the lever on the handlebar. In this case, loosen the clamp screw, adjusting the lever in the position the most comfortable for usage, then tighten the screws. The second plane of adjustment will be the change of the distance between the brake handle and the handlebar. Using the allen/ adjustment screw which is in the inside of brake lever or integrated with lever. By turning the screw in opposite directions we increase the lever stroke – the distance from the handlebar or decrease.

16.2. Torpedo brake (foot)

The mechanism established as part of the rear wheel hub, runs through reverse rotation of the pedals (turning the pedals backward). Maintenance and repair of this type of brake should be performed at authorized service.

16.3. Hand brake

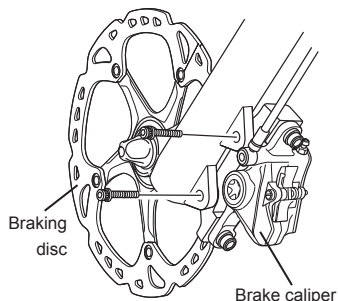
There are two basic types of hand brakes operated and activated by a levers located on the handlebar, these are disc brakes and rim brakes (V-brake). The bicycle can have one lever which controls the front brake. The lever is situated on the right side of a handlebar. Two levers are responsible for the front and rear brake work, the right lever operates the rear brake and the left lever operates the front brake.



16.4. Disc brake

The disc brake is a mechanism in which braking obtained by the pads friction (lining) on the brake disc. Bicycle user is obligated to regular inspections of these components, which wear during braking. Disc crack, decrease of braking effectiveness, noisiness should be a prerequisite for an urgent check of brake components, and in case of identified defects, replace with the new ones.

Disc brakes may be mechanical or hydraulic. In the case of mechanical brakes it is important to control, that the lines and covers are not frayed, broken, bent, then should replace them with new ones. In the hydraulic discs brakes, reduction of the braking effectiveness may result from airlock of the system requiring venting. During fluid refilling or replacing, it is important to use brake fluid, mineral oil, which was initially used considering the fact that these fluids do not mix together. Filling brake fluid, venting the hydraulic system, replacing worn linings, wires, lines or covers, are recommended to be assigned to an authorized service.



⚠ WARNING

In case of removing the wheel, it is necessary to put retaining element between brake linings for an unintended pressing the brake handle without the protection can lead to an air lock in braking system.

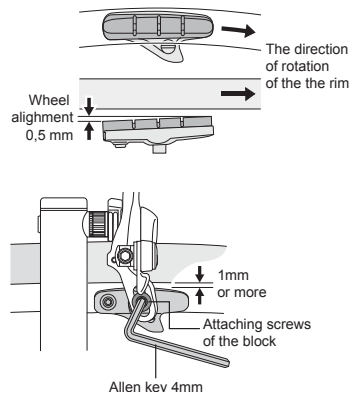
⚠ WARNING

While using the discs heat up to high temperatures, after braking you should wait 30 minutes before touching the disc otherwise it can result in burns.

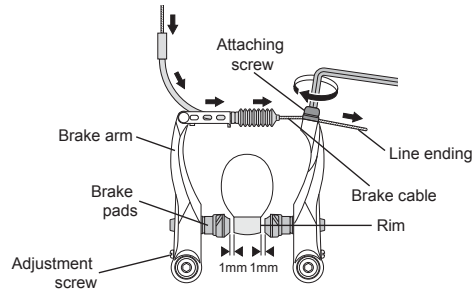
16.5. V-brake

Using rim brakes (V-brake), braking obtained by the brake pads friction on the rims. To achieve the best efficiency of the rim brake user is obligated to regular inspections of rims and brake pads condition paying particular attention to their purity. It is important that on their surface does not accumulate grease or wax. Proper working is possible when the arms are working equally, and the friction part of pads should contact their entire surface with a rim. The distance between pads and the rim should be 2-3 mm and while braking the pad should contact its entire surface with a rim. Adjusting the pads, should pay attention that the upper edge of the pad does not touch a tire. From time to time the brake pads should be adjusted due to pulling the brake lines and wearing out the friction surface of a pad. Frayed lines, ragged brake pads without visible grooves on the surface should be replaced with new ones.

The pads adjustment is done by using the adjusting nuts on the brake levers. After turning the nut to the left the distance between the brake pads and the rim decreases. If this adjustment method turns out to be insufficient you should loosen the line fixing bolt on the brake arm, pull the line and tighten the screw. Brake arms adjustment is done by tightening or loosening the screw on the brake arm that they are exactly symmetrical to the wheel.



Remember that the operation of the rim brake has a big impact on the rims condition. Do not ride with a worn out or centered rim. Slightly curved wheel should be centered. In case of high centering and wear replace the rim with a new one. These activities should be done by an authorized service.



16.6. The braking technique

First we use the rear brake, and then gently and gradually press the front brake. Sudden and fast use of the front brake can block the wheel and cause dangerous fall. Brakes except for the stopping function are also used to control the speed of the bicycle. It might be worth practicing a smoothly deceleration and stopping without locking the wheels (stopping their rotation). That technique is called a progressive braking modulation. Instead of pressing the lever rapidly you should gradually increase the press, if we feel that the wheel begins to lock, slow down the pressing a little that the wheel rotates. Locking the wheel leads to skid that can cause of the fall.

⚠ WARNING

Riding with improperly regulated brakes or worn out brake pads is dangerous and can cause a serious accident.

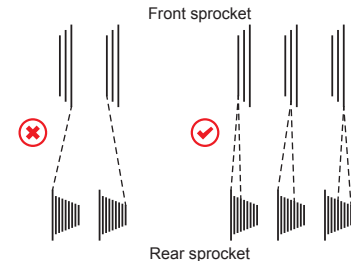
17. DRIVE

17.1. Crank mechanism

The crank mechanism is the first element transmitting muscle power to the wheels of the bicycle. Each mechanism consists of three basis parts: arms, sprockets and support axis. These elements are closely related and each of them must be made using same system. Properly installed crank mechanism in the bicycle should rotate smoothly, without stops, perceptible looses. Riding with perceptible loose of connection of support axis with a crank could recalibrate the holes in cranks. Not tightening the support input can cause support muff wear out in other words practically destroy the frame. Upper class bicycles are equipped with Shimano Hollowtech II which is based on the integration of the support axis with the right crank arm and outputting bearings on the outside, so the risk of clearance is the lowest. It is recommended that activities related with the elimination of the clearance, crank removing are carried out by an authorized service.

17.2. Changing gears

There are several types of levers for changing gears: lever, rotary, triggered and combined with brake levers. These mechanisms are installed to the handlebar, the lever controls the rear derailleur on the right side and the lever controls the front derailleur on the left side. Gears shifting that moves away the chain from the axis of symmetry increases the speed and moves the chain closely to the axis of symmetry ease the riding up and slow riding in difficult ter-





rain. Changing gears in the bicycle with rear inner hub is a matter of shifting the right lever to the desired position to get the desired speed.

To provide effective working gears, do not change gears by force, do not allow to chain crossing that means chain on the large front sprocket and on large rear sprocket or chain on small front sprocket and on small rear sprocket.

! WARNING

Changing gears can be done only when pedaling forward except for the bicycles with rear internal gear hub (multi-speed hub), then in order to change the gear should stop pedaling for a moment. Never change gears by force!

17.3. Derailleur adjustment

Out-of-adjustment derailleur, makes a lot of trouble during the ride and it is not only disturbing noise. In extreme cases it can lead to damage of the frame, rear wheel, chain and also lead to a dangerous fall and injuries to the user.

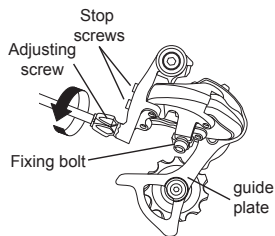
17.4. Rear derailleur

Adjustment of the low position

- Set the chain onto the smallest rear sprocket.
- Turn on the cable tension adjusting screw and remove the cable.
- Using the stop screw H adjust the derailleur roller to parallel position to the smallest sprocket.
- Insert the shift cable, stretch it, tighten the screw.

Adjustment of the upper position

- Set the chain onto the largest sprocket.
- Using the stop screw L adjust the derailleur roller position under the largest sprocket.



Check the shifter functions on all gears. Rotating the derailleur adjusting screw (line with shifter cover goes through her) make an adjustment that the chain smoothly and quietly moved on the sprockets.

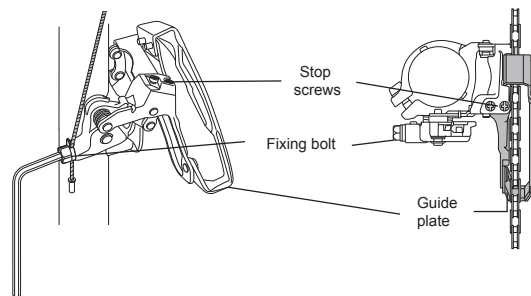
17.5. Front derailleur

Start adjusting by setting the chain on large cassette sprocket and on small chainring. On the derailleur there are two stop screws. Tighten the stop screw "L" (if the screws are not described then on the principle of turning should find the right one) until the inner part of guide is placed at the distance of 1 mm from the chain.

Next, set the chain on the smallest cassette sprocket and on the largest chainring at the front. By the stop screw "H" adjust the guide so its outer part was 1 mm from the chain. Then again set the largest sprocket at the rear and with the line regulator pull the line so the derailleur smoothly drawing up the chain on the middle ring. Check the derailleur on all gears. You should remember that the shifter guide should be placed parallelly to the sprockets, and the distance between outer guide plate and teeth in vertical should be between 2 and 4 mm.

17.6. Internal gear hubs

Inner gear hubs are the internal mechanisms that work as a shifter in the bicycle. They are mainly used in comfort urban bicycles and trekking bicycles. The inner gear hubs are very convenient, durable and dirt resistant. Shifting is done by a lever on the right side of handlebar.



Adjusting the 3-speed hub requires setting the shifter in position 2, then with an adjuster, barrel located near the lever pull the line so to set a marker between two lines located on the right side of rear hub (looking from above).

Adjusting the 7 and 8-speed hub is done by setting a lever in the position 4 then pull the line with the adjuster, barrel located near the lever so to set in line two markers located on the right side of rear hub (looking from above).

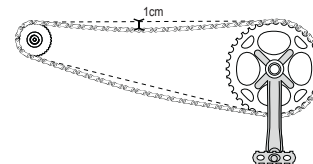
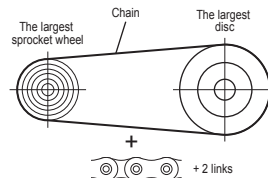
WARNING

Due to the complexity of the mechanism and complicated structure of internal gear hubs, maintenance, repair and hubs regulation, should be made only by authorized repair centers.



18. CHAIN

Regular cleaning and lubricating of a chain contributes to a longer service life of the drive system. Before lubricating the chain should be cleaned from sand, mud, dried and then protected using a preservative products, it is recommended to use light oil with teflon. An extremely important factor to influence the life of the drive system is the way of its operation. It is not recommended to ride on extreme gears (chain on the large front sprocket and on the large rear sprocket and small front sprocket and small rear sprocket) and perform shifting under load. When shifting should limit the pressure on pedals to minimum. Such drive work allows to avoid sudden jumps and jerks of chain, which translate into service life of all drive components. If the drive works loud and the chain jumps between the sprockets and it is not the fault of non properly adjusted derailleur – check that the chain is not extended.



19. PEDALS

For installation the bicycles pedals (platform or SPD) use a flat wrench 15 mm or an allen key usually 6 or 8 mm, depends on pedals.

Pedals are usually marked with letters R-right and L-left on the pedal axis/cover. Before installation, lubricate the thread in cranks and pedals, preferably using anti-seize lubricant. Right pedal (R) is screwed into the right crank (crank discs), by turning to the right (clockwise), left pedal (L) to the left crank by turning to the left (counterclockwise). In case of using allen wrench, screwing directions are reversed.

Screwing starts carefully by hand, then tightening by the key nr 15 mm or an allen key. The pedals must be tightened strong so the pedal axle leaned on a crank.



⚠ WARNING

If during the bike riding, you will feel clearance in pedals conjunction with cranks mechanisms, immediately stop riding. Continuation of a ride is possible after proper pedals tightening.

⚠ WARNING

The pedals must be tightened with considerable force to the crank mechanism using specialized wrench with a long arm. Too loosely tightening will cause pulling them out of cranks and thread damage.

20. AMORTIZATION

Standardly every bicycle has a minimum amortization which tires are provided. Less pressure in tires enhance the riding comfort. Minimum and maximum pressure are given on the side of a wheel.

20.1. Amortization forks

The damped suspension is designed to improve ride comfort as well as the safety of the rider.

Amortization fork lock (Lockout) - the ability to block the shock absorber work, it is useful while riding on flat terrain, without any bumps – for example asphalt. It prevents pumping – loss of pedaling power which is damped by the shock absorber. The fork will not be blocked in 100%. A few millimeters stroke will stay which is necessary for the fork unlocking system. Amortization locking knob is at the top of the right fork leg. Turning the knob clockwise, the amortization of the fork is locked, turning in the opposite direction the amortization of the fork is unlocked.



Rebound - is a damping adjustment while fork rebounding (movement from the state of deflection to return to maximum stroke). More advanced shock absorbers have damping adjustment. The adjustment knob located on the bottom of right fork leg. On many small potholes, it is recommended to increase the speed of fork rebound. In easier terrain, while slowly riding on large bumps it is recommended to reduce the fork rebound. Turning the knob clockwise (looking from the bottom of the fork), the speed of rebound decreases (+ on the fork), turning in the opposite direction increases the speed of rebound (- on a fork).



pokreĵto regulaciji

Remote lock control (Remote Lockout) – allows to block and release the lock of fork amortization using shifter located on handlebar.



⚠ WARNING

Do not block the fork while riding in rough terrain, downhills or jumpings. It can cause a damage to the fork as a result of compression under heavy load. Riding with active blockade in difficult, uneven terrain can cause damage to the fork.

20.2. Spring shock absorber

The hardness adjustment is on the top part of right fork leg. In models equipped with a fork lock (lockout), the hardness adjustment is located on the top of left fork leg. Rotating the regulator clockwise increases the hardness of a fork, rotating in the opposite direction reduces the hardness.

20.3. Air shock absorber

Air as a absorbing medium. The hardness of the shock absorber regulates by the air pressure in the air chamber of the shock absorber. The valve to pump is located on the top, left side of fork leg.

⚠ WARNING

The shock absorber adjustment requires experience and expertise, also tools, so these activities should be carried out in authorized services.

20.4. Pre-tensioning

It concerns a resilient medium – this is the initial deflection (hardness) of the shock absorber under the weight of a rider. Every shock absorber should be adjusted to the weight of a rider,

the value should be large enough to not pressing down at high loads and not too small to allow to use the full range of suspension stroke.

20.5. Initial deflection / SAG

This is the distance by which the fork or a damper will shorten by the mass of a cyclist sitting calmly on the bike. To determine the appropriate fork pressure, you must correctly determine the value of the initial deflection/SAG.

Large initial deflection (SAG) improves adherence and comfort, but it can be the cause of the suspension bottoming on large unevenness. It also leads to excessive fork dive while braking and swinging of the rear suspension during pedaling. On the other hand, when SAG is too small we are losing the benefits of an amortization.

To calculate SAG is very simple: accepting the SAG 25% = 0,25 x actual stroke [mm]. To measure the stroke in practice should use the installed by the manufacturer O-ring or when the shock absorber does not have the o-ring set "zip" and slide it down to antidust seal (after the measurement should take it off to not scratch the fork legs) then sit on the bicycle in a natural riding position. O-ring/zip moved by a predetermined number of millimeters. Just measure with a line. Example: fork: actual stroke 120 mm, SAG 25%, 30 mm – so while sitting on the bicycle should remain 90 mm stroke. Damper: actual stroke 57 mm, SAG 25%, 14 mm o-ring offset on damper.

In case of changing the tires special attention should be paid to their size. The distance between upper tire edge and the bottom of the fork crown, at its maximum deflection, should not be less than 10 mm.





! WARNING

Using too big tire, which size is not adapted to the fork, is very dangerous and can lead to serious accident as a result of the front wheel blockage.

20.6. Maintenance and fork greasing

To ensure high performance, safety and long service life of suspension is required to periodically check the tightening torque of the fastening element and performing regular maintenance and fork lubricating. In case of riding in difficult terrain such reviews, maintenances, lubrications should be carried out more often.

Never use a pressure washer to clean the fork because water can get inside the fork through dust seals. Whenever you notice that the fork's work has deteriorated, immediately contact the service to conduct a fork control.

Required steps for proper operation of the shock absorber:

- After every ride clean the fork legs, antidust sealings from mud, dust and wetness. Check the fork for any cracks, mechanical damages.
- Every 25 working hours (or after riding in difficult, extreme conditions), check the air pressure, sealings, lubricate working surface with teflon oil (Brunox, Fork Deo), check that all fork screws are tighten properly.
- After every 50 hours of operation, the first service (1 SERVICE) of the fork in the authorized service of manufacturer of the component is required.
- After every 100 hours of operation, the second service (2 SERVICE) of the fork in the authorized service of manufacturer of the component is required.

1 SERVICE:

The fork's work control, cleaning, lubricating the bushing, lubricating the line and cover of remote lock cover, control the torque (tightening), air pressure control, checking the fork for any scratches, dents, cracks, bends, signs of wear.

2 SERVICE:

1 SERVICE + disassembling, cleaning whole fork, lubricating antidust seals and oil spills, lubricating upper covers of remote lock and stroke adjustment, sealing upper air valve covers by greasing it, checking for air leaks, the torque control (tightening), adapting to the individual preferences of a rider.

20.7. Rear shock

The hardness of a shock is regulated by the pressure in the air chamber of the shock.

Lock out - controlled by a lever localized in the lower part of the shock absorber. Lever turned into closed position locks the shock absorption and turning in the opposite direction unlocks the shock absorption.

Rebound damping (Rebound) - regulation rebound clamp sets the speed at which the shock absorber returns to its original state. Rebound adjustment is in the upper part of the shock absorber. Clockwise rotation reduces the speed of return to the original state, counterclockwise rotation increases the speed.

Shock absorber inspection:

- Before every ride control the proper tightening of the shock absorber to the frame.
- After every ride clean the sliding surface of the piston and seals from dirt (dust, wetness, mud).
- Every 25 hours (or after riding in difficult, extreme conditions) check the piston, sealing, moving elements lubricated with teflon oil.
- Check if there are no cracks, mechanical damage.
- After every 50 hours the service of a shock absorber in the authorized service of manufacturer of the component is required.

⚠ WARNING

Do not exceed the maximum pressure indicated on the shock absorber! To wash the shock absorber never use high-pressure washers!

21. CARRIERS

Before riding a bicycle, the maximum load capacity of the carrier should be checked, the value is indicated on the carrier and the propriety of tightening joined elements.

The carrier is not suitable for attaching the seat and a bike trailer.

When the carrier is loaded, the riding properties have changed, especially in terms of steering and braking, you should be especially careful.

In case of luggage transportation, you should pay attention to evenly distributing the luggage on the carrier, make sure if there are no loose straps that could get into the spokes while riding, and the luggage does not obscure the lighting elements of the bicycle.

Do not change under any circumstances the structure of a carrier.

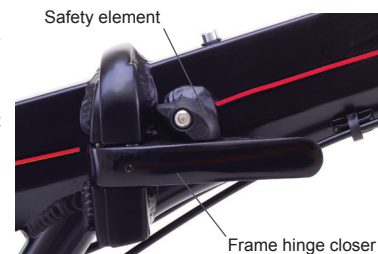
In case of riding with a luggage it is important to remember to not exceed the maximum permissible load of the whole bicycle.

22. FOLDING BICYCLE



22.1. Frame hinge

Frame hinge is the most important element of a folding bicycle. Before every ride, make sure if it is in a proper technical condition. Properly adjusted frame hinge closer, eliminates unnecessary movement or clearance of the hinge, making the bicycle frame is securely closed.



⚠ WARNING

Inadequate adjustment of the frame hinge closer may result the damage to the bicycle or rider's injury. Do not ride with loose frame hinge, if you are not sure if it is properly adjusted, contact with the service.

To assemble the frame hinge you should:

- Unlock the frame hinge closer
- Open a frame hinge closer
- Set the frame



22.2. Steering-column hinge

Before every ride check the technical condition of the steering-column hinge. Properly adjusted steering-column hinge eliminates movement and clearance of the hinge, causing the steering-column is properly closed.



⚠ WARNING

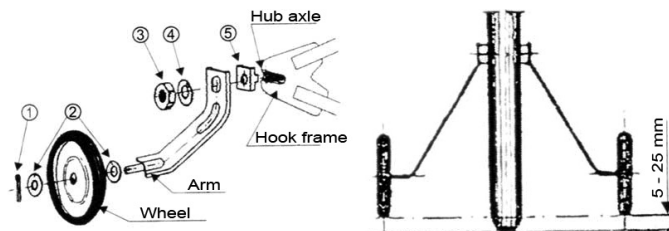
Inadequate adjustment of the steering-column hinge can result the damage to the bicycle or rider's injury. Do not ride with loose steering-column hinge, if you are not sure if it is properly adjusted, contact the service.

In order to assemble the steering-column hinge you should:

- Unlock the steering-column hinge
- Open the steering-column hinge
- Set the steering-column

23. SUPPORT WHEELS ASSEMBLY

Children's bicycle with support wheels should be used on flat ground, under the adult supervision. Special attention should be paid to the distance between the support wheels, because there is a danger of hooking the obstacle if the child will ride too close to the obstacle.



Support wheels assembly does not affect on the adjustment of axis of the rear wheel, because the axis tightened with nut locks. Put on the rear hub axle the retaining washer, wheel arm, mudguard strut, then the washer and tightening the nut. Setting the support wheels as the clearance between the wheel and the ground, when the bicycle is in riding position, be up to 25 mm.

⚠ WARNING

During riding a bicycle with support wheels watch the obstacles or uneven terrain, which can cause a change the direction of movement and consequently overturn the bicycle causing injuries or rubbing parts of the body of a child. PARENTS/CAREGIVERS should pay special attention to the child that the child keeps track wider near the obstacles, kerbs etc.



24. LIGHTING

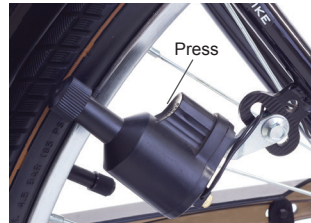
Lighting is an important element deciding on a cyclist safety. While riding a bicycle at night, in bad weather (fog, rain), in a tunnel there is an obligation to use the correct, properly working lighting.

In compliance with the road traffic rules, to ride on public roads the bicycle must be equipped with the following lighting elements.

- at least one front light white or yellow glowing steady or flash – like the front light battery powered or dynamo
- at least one rear red light, reflective
- at least one rear light glowing steady or flash.

Two types of dynamo are used:

- sidewall dynamo, lighting activates by pressing the dynamo element, and switching off by pulling off the dynamo to the starting position
- hub dynamo, switch on/switch off the light with a light switch on the front lamp



In case of the lamps with changeable light bulb (ask the seller of what kind of light bulbs has been used in a bicycle) in front lamp there is a light bulb 6V 2,4W, in rear lamp 6V 0,6W. If we make a disconnection of light wiring, keep in mind during assembling that the cable with white stripe is the negative (ground), and the cable without the strap is a plus, as marked on the light.

25. SERVICE AND MAINTENANCE

⚠ WARNING

Progress and technological advancement of individual components of the bicycle makes it impossible to provide in this manual instruction all information relating to repair and maintenance of a bicycle. To minimize the risk of an accident and possible injuries to the user, it is important that any repairs or maintenance not described in detail in this manual instruction have been carried out by the authorized services. In agreement with the seller specify all the requirements for maintenance of the bicycle, based on a multitude of determining factors such as riding style, intensity, area and so on.

Many activities related to the repair or maintenance of bicycle requires specialized knowledge and tools. If any doubts about any servicing, contact with the seller or authorized bike service is recommended. Remember improperly performing repair actions and maintenance can cause damage to the bicycle resulting in an accident, which could cause injuries and even user's death.



⚠ WARNING

The manufacturer requires solely the use of original spare parts.

The bicycle must be kept in good technical condition, do not forget of systematic cleaning. In case of riding in the rain or on mud should clean the bicycle after every ride. Do not dry clean the bicycle to prevent scratches on the painted surfaces. Remove dirt with wet sponge or cloth frequently rinsed in water. Do not use high pressure washers. The washed bicycle wipe dry with a clean cloth. The saddle cover is washed with water and soap. After rinsing the saddle should be wipe dry (for cleaning do not use gasoline solvents).

For lubrication use suitable for this purpose oils or grease, which can be purchased in specialist bicycle shops. The chain should be cleaned and lubricated at least every 100 km, remember that too generous lubrication brings opposite effect, preferably a light oil with teflon addition. Chain condition has an influence on the work of all elements working with him. For fork legs lubrication use oils and greases with Teflon addition, do not use products containing lithium, which can cause the damage of internal parts of the fork.

To maintain chrome and lacquered parts use only proper products. To lubricate the chain, brake lines and gears it is recommended to use oil, to hubs bearings, support and handlebar – grease. The frequency of these activities will depend on the intensity of bicycle use. If the bicycle is operated during winter, should be lubricated with greases every 2 months otherwise once a year after the end of the season.

In the first period when the bicycle use is reached, the manufacturer recommends after 30 days or after 15-20 hours of riding a service review in authorized service.

⚠ WARNING

As in the case of all the mechanical parts, the bicycle wear out and is subjected to high stresses. Various materials and components of the bicycle can react to wear and fatigue stress in different way. If the durability of structural component is exceeded it may be damaged, causing possible rider's injury. Any cracks, scratches or any discoloration in areas of high stress point that the lifetime of the component has elapsed and it is recommended to replace it with a new one.

26. THE TIGHTENING TORQUES FOR THE SCREW CONNECTIONS

Component	Connection	Nm.
Front derailleur	Stop screw	5 - 7
	Adjusting screw	5 - 7
Rear derailleur	Stop screw	8 - 10
	Adjusting screw	5 - 7
Wheels	Wheel nuts	20 - 35
	Support wheel nuts	30-40
Brake	Adjusting screw to mount the brake to the frame / fork V-Brake brake	5 - 7
	Adjusting screw to mount the brake to the frame / fork Rim brake	7 - 10
	Adjusting screw	5 - 7
	Brake lever	6 - 8
	Brake pads	5 - 7
Pedals	Pedals axes	30 - 45
Saddle and seat post	M5 screw	5 - 7
	M6 screw	6 - 8
	Mounting seatpost with one screw in the frame	8 - 12
	Saddle with a seatpost	20 - 25
Crank	Adjusting screw of square crank mechanism	30 - 45
	Adjusting screw of Octalink crank system	35 - 50
Classic handlebar stem	Fixing bolt	18 - 23
	Clamp screw	15 - 20
A-HEAD handlebar stem	Allen screw	8 - 12
	Handlebars tube sleeve screw	15 - 20

For some components the tightening torques are placed on parts.



NOTES

A series of horizontal dotted lines for taking notes, spanning the width of the page.



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