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READ



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Bicycle Owner's Manual
Bicycles

RIDE

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LEVIT

LOVE

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Welcome to the LEVIT family!

We have been assembling and selling bicycles in Hawk Mountains for more than 30 years, and during that time we believed that riding a bike is key to fun and transportation in the overcrowded and ever-faster world that we live in.

We make every bicycle in such way that it provides you with an excellent riding experience. We select very reliable components, and we physically test them ourselves. That's because your satisfaction is our goal. The goal of your journey is then up to you, regardless of whether you are after a fast trip to work, a trip with your family, or finding new adventures in the country.

If you choose a bike with a motor to assist you, or you use the strength of your own body, we would like to wish you thousands of happy miles.



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1. Important information before you set out

1.1 Bicycle classification and fit

Category 0

Kids' bicycles with wheels of up to 20" are intended to be used in enclosed areas and under supervision of a person responsible.

Kids' bicycles (ISO 4210-2)

The maximum load* of kids' bicycles with 20" wheels is 45 kg

2 Category 2

The bicycle is intended to be used on tarmac roads and cycling paths, roads with sand, dirt or gravel surface, hard and soft walking paths.

Cross bicycles, kids' bicycles with 24" wheels (ISO 4210-2)

Cross bicycles and kids' bicycles with 24" wheels are intended to be used on roads, and can be used for sports and free time purposes. The maximum load* for cross bicycles: 120kg, 80kg for kids' bicycles with 24" wheels.

Cross and trekking e-bikes (EN15194:2017 and ISO 4210-2)

Electronically power assisted cycles (EPAC) are subject to the same conditions as regular bicycles. Maximum load: 130-140kg.

Kids' e-bikes (EN15194:2017 and ISO 4210-2)

Electronically power assisted cycles (EPAC) are subject to the same conditions as regular bicycles. The maximum load* of kids' e-bikes with 24" wheels is 80kg.

City e-bikes (EN15194:2017 and ISO 4210-2)

Electronically power assisted cycles (EPAC) are subject to the same conditions as regular bicycles. Maximum load*: 130-150kg.

Folding e-bikes (EN15194:2017 and ISO 4210-2)

Electronically power assisted cycles (EPAC) are subject to the same conditions as regular bicycles. Maximum load*: 130 kg.

Category 3

Mountain bicycles are intended to be used on tarmac roads and cycling paths, roads with sand, dirt or gravel surface, hard and soft walking paths and paths with loose stones or roots.

Mountain bicycles (ISO 4210-2)

They are intended for sporty ride cross country, and their maximum load* is 120 kg.

Mountain e-bikes (EN15194:2017 and ISO 4210-2)

Electronically power assisted cycles (EPAC) are subject to the same conditions as regular bicycles. Maximum load*: 140 kg.

* The maximum load (maximum permissible load) is a sum of bicycle or e-bike weight, rider's weight and weight of possible weight carried. The information related to the load of your bicycle is always provided on the frame.



WARNING: The bicycle or e-bike must never be exposed to greater stress and different operating conditions than those for which it was developed. If these conditions are not adhered to, the bicycle may suffer damage, the rider may lose control of the bicycle/e-bike and a crash may ensue. A bicycle and all its mechanical components are subject to wear and are exposed to great mechanical stress. Various materials and components may react in various ways to wear or stress. If a projected lifespan of a component is exceeded, the component may fail suddenly, and possibly cause an injury to the rider. Any breaches, cracks, grooves or discolouration on places that are exposed to great stress usually indicate that the projected lifespan of the particular component has been reached, and the component must be replaced.

Frame

Since you are reading this Bicycle Owner's Manual, you may have already chosen the correct frame size with your dealer. It is important to select the correct frame size to be able to enjoy comfortable and safe riding of your bicycle. General rule for frame selection is as follows: Step astride above the top tube of the frame; while standing like this, there should be a gap of at least 8cm from your crotch to the top tube. This applies especially to mountain and cross bicycles.

The reason for this is the need to get off the bicycle frequently with these types of bicycles, especially in more difficult terrain. It is recommended that the space is approximately 3 cm in the case of road and urban bicycles. Also, a suitable frame size can be calculated using the following formula: crotch height (measured with legs slightly apart) $\times 0,56$ (= frame size in centimetres; the size in frames can be achieved by dividing this number by 2.54).



Seat and seatpost

Seat can be adjusted in three different ways – height, pushing it forward or backward, and changing its angle.

Seat height

Sit on the bicycle and place your feet on pedals, so that the cranks are in vertical position and one of your legs is stretched. If the seat is in optimum height, this leg should be slightly bent, the angle between your shin and thigh-bone should be roughly 3-5 degrees. Seat located too high will result in overloading of your back and legs and hips stretched too much. On the other hand, if your seat is too low, it will result in excessive strain on your knees and thigh muscles. The height can be adjusted by a quick release (nut) at the end of the seat tube. After you have adjusted the seat, check that the seatpost is tightened sufficiently.



WARNING: The maximum permissible height of the seatpost is indicated on the seatpost either with a groove, or a symbol. Never fix the seatpost in the frame beyond this permissible height! This will prevent damage to the bicycle frame, rupture of the seatpost and possible injury to the rider!

Angle of the seat and horizontal position

The angle of the seat can be adjusted, too. The best starting position when adjusting the seat angle is the one where seat is parallel with the floor. It is necessary to try different positions of your seat and decide to stick to the position that is most convenient to you. The seat can be also adjusted to be located closer or further from the bicycle's handlebars.

The seat angle and distance from handlebars can be set by a bolt in the seat lock (or two of them, located next to one another in the direction of the ride). After you have loosened the bolt, set the seat forward or backward, set its angle and tighten the bolt. Try to move the seat several times, thus confirming that it is tightened correctly. If the seatpost lock has two bolts (one in front of the seatpost tube, the second one behind it), alternately loosen both of them, set the seat forward or backward, and then tighten both of them, doing so alternately again. You can set the angle of the seat by loosening one of them and tightening the other.

The following rule should be observed while adjusting the distance of the saddle from the handlebars: while sitting on the bicycle with both feet on pedals (with one leg forward), the vertical should run through your knee and the centre of the pedal (plumb line is a handy tool here).

Handlebars and stem

Two types of stems are used on LEVIT bicycles: quill stems for threaded headsets,

and A-head for threadless headsets. It is important to know which type of stem you have on your bicycle before you start setting it.

Quill stems are inserted into the steerer tube of the fork, and are attached by a long bolt that runs through the stem. The nut on the end of the bolt at the lower end of the stem is conical or has a shape of obliquely cut cone; in both cases, however, its function is to tighten the stem in the fork steerer tube.



NOTE: If the stem is not loosened after you have loosened the bolt(s) in it, hit the bolt with a rubber mallet or with a hammer (using a wooden block between the component and the hammer).



WARNING: Maximum permissible height is marked on the stem with a line. Never adjust the stem so high that the line is visible! Thus you will prevent damage to the stem and possible injury to the rider.

A-head stems are attached on the steerer tube from outside. The height of this type of stem cannot be adjusted. If you want to have your handlebars higher, you will need to either select higher handlebars, or a different stem with a different angle. For this type of stem, the headset play is set by bolt with head on the top of the stem.

This bolt is connected to the fork steerer tube by a star nut that is pressed into the steerer tube. Play adjustment of the headset may be carried out only with loosened allen key bolts that fix the stem to the steerer tube. After you have adjusted the play of the stem, tighten these two bolts. If you feel play in the headset even after doing this, check the steerer tube length. The end of the steerer tube must be at least 2-3mm under the top edge of the stem, not more, so that the stem does not get deformed after its bolts have been tightened. If the steerer tube reaches the edge of the stem or even exceeds it, it is necessary to add a spacer underneath the stem or the headset cap, or have the steerer tube shortened in a professional service.



NOTE: If you are not entirely sure how to adjust the stem and headset, leave these tasks to a qualified professional (authorized dealer). Loose stem on the fork steerer tube may result in the rider's crash and injury. A headset that is too tight may suffer damage by operation pretty soon; the same applies to riding with a headset whose play is too big.

Racks for carrying loads and luggage

Carrying objects and load in hand while riding a bicycle may be very dangerous and can cause loss of control over bicycle, resulting in fall and possible injury of the rider. If you equip your bicycle with a rack, remember that the frame is designed primarily for the weight of the rider. Carrying loads that are too heavy might result in damage to the frame which is not covered by our warranty.



1.2 Checking your bike before and after ride

All LEVIT frames and all components used have their limited and finite lifetime. The length of a frame or component lifetime is defined by its construction and design and materials used, but also by maintenance and intensity and frequency of their use. Having your bike checked at a qualified professions should become natural to you.

By having your bicycle checked, you can prevent many technical issues, as professional checks may eliminate minor flaws before they turn major and possibly dangerous. Consequences of failing to have your bicycle checked may be dire in many cases. You are responsible for checking your bicycle before every ride.



WARNING: Warning: In order for the bicycle to be traffic-eligible, it is necessary that it is equipped with lights and reflectors compliant with EN 14764, 14765, 14766, 14781 regulations. Riding at night is advisable for skilled cyclists only, so we therefore do not recommend it for children. Clothing made of reflective materials that will improve your visibility at night is a welcome and useful accessory for night rides.



IMPORTANT: It is recommended to check your whole bicycle before you set out for a ride, especially if you crashed previously!

Wheels and tires

Check if the wheels are trued, if spokes are tight and none of them is missing, and check for side play in the wheels. Check the quick releases in wheel hubs. Incorrectly tightened quick release mechanism may result in a serious injury! The quick release lever must always be fully closed, and offer great resistance upon opening. Also, check pressure in tyres, if it is not too low for the ride, or too high (the maximum permissible pressure is provided on the tyre sidewall). In addition to that, check that tyres are mounted safely in rims. Check the wear of your tires and replace them if necessary.

Brakes

1. Rim brakes:

Check your brakes and adjust them if necessary. While squeezing both brake levers, push the bike forwards. Brake shoes should be pressed against the rims, but the brake levers should not get in contact with the handlebars at the same time. Observe which brake operates which wheel. The left-hand brake lever operates the front wheel brake, the right-hand brake lever operates the rear wheel brake. Check if cables are not frayed or twisted unnaturally. Cables stretch after some time and brake shoes get worn away, so it is necessary to adjust your brake regularly and replace worn components.

2. Disc brakes - hydraulic:

Test the power and efficiency of hydraulic brakes in the same way as you would test rim brakes. In addition, however, press brake levers several times. If the lever feels “spongy” (touches the handlebars), or becomes “stiff”, it is indicative of air in the hydraulic system, and it is necessary to have your brakes serviced. Examine the whole hydraulic system if you notice leakage. Do not ride your bike while there is too much air in the brake system, as your brake may not be efficient, which might result in crash and injury.

3. Disc brakes - mechanical:

Check that the moving brake pad sits on the rotor correctly. Also check how the rotor is touching the fixed brake pad on the other side. The rotor must never touch the brake housing; when the brake is activated, the rotor must get in contact with the fixed brake pad only in result of movement of the moving pad. The fixed brake pad can be moved out towards the rotor by allen key or adjuster screw.

Shifting and chain

Chain “jumping” up and down on sprockets, difficult shifting of individual gears, and noisiness: these are the basic signs of incorrect functioning of shifting system. Both derailleurs must be adjusted regularly due to the fact that their cables get stretched out. The chain should be regularly cleaned and lubricated with appropriate lubricants. The chain gets stretched with time, and so it must be replaced regularly. A stretched or damaged chain may damage sprockets and chainrings.

While riding, try not to shift in such gears that cause extreme lateral skew of the chain (over the sprockets - chainrings axis), i.e. when the chain is on the small chainring, shift larger sprockets (low gears), and when the chain is on the large chainring, shift smaller sprockets (high gears). If the chain is on a single sprocket and crankset rotation causes it to jerk, check joints of individual links if they are not disconnected. A disconnected chain roller may result in it snapping and rider’s fall and possible injury.

Crankset with chainrings, bottom bracket and pedals

Keep the crankset tightly attached to the bottom bracket. The bottom bracket should rotate feely, and it should not have side play. Check that pedals and chainring bolts are tightened correctly.

Headset

Keep the headset bearings set correctly. The fork’s steerer tube should rotate smoothly. The best way to check the steering play is by braking with front brake, grabbing the headtube and headset and moving the whole bicycle forward and backward.

Frame

A frame that is bent or has cracks must be replaced immediately. Never try to unbend or repair yourselves. Riding on such a frame can be very dangerous. Frames - just like any



other components - have a limited lifespan that is defined by the degree of wear. A frame snapping may result in rider's fall and possible injury.

Seatpost

Make sure that the seatpost is inserted into the frame sufficiently. The mark that indicates the maximum permissible extension of the seatpost must never be visible. Also check that the quick release or the seatpost bolts are tightened sufficiently. Observe the torque provided on the seatpost clamp if your seatpost is made of carbon; overtightened seatpost clamp could result in damage to the seatpost and its cracking. This may result in an injury to the rider. If the seatpost keeps sliding back into the frame, visit a professional service.

Stabilizer wheels

Stabilizer wheels of kids' bicycles are attached underneath the second bolt of the rear axle. The stabilizer wheels should be 1cm above the ground.

1.3 Principles and rules of safe riding

Majority of serious accidents while riding a bicycle involve a head injury. Therefore, purchase an appropriate helmet that complies with all relevant standard and is certificated for use on roads. It is very important to select the correct size of the helmet; it should be neither too loose, nor too tight on your head.

Clothing

Suitable cycling clothing can improve your riding experience. Special functional cycling wear can also improve your safety – bold colours and reflective materials will make you more visible for others. Cycling gloves are very practical, too. Be careful with loose clothes, as loose trouser legs in particular may easily get caught up by chain. Never ride your bike in sandals or flip flops. We do not recommend riding with headphones as loud music may cause lower focus and thus prevent you from hearing that danger is coming.

Never ride your bicycle being under the influence of alcohol or drugs; this is forbidden by law. By doing so, you expose yourself and others to danger

Rules of safe riding on public roads

The basic rule is to behave as you would while driving a motor vehicle.

The cyclist is a regular traffic participant!

- If road traffic rules of your country do not specify otherwise, always ride on the left-hand side of the road, in the same direction of the traffic, never in the opposite direction. Special lanes for cyclists in one-way roads constitute an exemption from this rule; while riding in them, follow the traffic signs for cyclists.

- Respect traffic signs and light signals.
- Be careful while overtaking cars as drivers of motorized vehicles are not used to having regard for cyclists, and often signal badly.
- When changing direction, use your hand to indicate your intention in a timely manner.
- Ride along a row of parked cars – do not swerve towards the shoulder of the road after every parked car.
- When riding on a road, always stay at the shoulder of the road, and give a clearly visible hand signal when changing directions. Be very careful when riding through large junctions.
- When you reach pedestrian crossing, it is important to get off the bicycle and cross the road as a pedestrian with the bicycle pushed next to you.
- Do not ride on pavement for pedestrians, unless signs indicate that it is a cycling path!

IN ADDITION TO THESE BASIC TRAFFIC RULES, IT IS USEFUL TO STICK TO THE FOLLOWING TIPS TO INCREASE YOUR SAFETY:

- A bike bell could prove to be very practical.
- Presume that drivers of motor vehicles do not see you, and be especially cautious at exits and entryways.
- Watch out for dogs! Try to ignore them, and if this does not prove effective, get off your bicycle and try to place it between you and the dog.
- Be careful about bumps and obstacles on the road: potholes, sewerage, rails, wet cobblestones etc.

Riding in bad weather

Bear in mind that brakes have decreased efficiency in rainy weather. Therefore, it is vital that you start braking earlier rather than late; be more careful when braking. Remember that grip of your tyres decreases on wet surface, and the tyres are more prone to skidding, which may result in your crash. A cycling helmet, especially if equipped with visor, can protect your eyes and face from rain quite well, but it must never restrict your safe vision.

1.4 RIDING ETHICS

Riding off-road

Riding off-road is more demanding than riding on road. Bear in mind that if an accident occurs, a helping hand may be far away.

THEREFORE, ALWAYS CARRY WITH YOU:

- Therefore, always carry with you:
- 4mm, 5mm and 6mm allen keys
- inner tube patch kit and a spare inner tube
- tyre levers



- bike pump or compressed air canister
- documents and money
- phone to call for help

Do not ride alone in areas that you do not know. Respect signs, private and public grounds, too. Do not ride beyond defined roads / paths (cycling paths). Be considerate of other people, walkers, horse riders, other cyclists and animals.

Descending on a mountain bike

Great speed can be achieved when descending on a mountain bike, and this poses a great threat and danger. Never underestimate the slope and the ground where you are riding. LEVIT mountain bikes are not designed to help you get down a special downhill track; this is where special DH or Enduro bikes will come in handy. While riding these, use appropriate equipment that includes certified full face helmets, full-finger cycling gloves, and back protector.



!!! Descending on a mountain bike may result in serious injury. Therefore, it is necessary that you always have protective equipment on, and have always checked that your bicycle is in perfect condition. However, even the best protection cannot guarantee 100% protection from a serious injury or even death. If your bicycle has suspension elements, get familiar with their function and control before venturing into descents. Not all bicycles are intended to be used for descending technical sections. Therefore, it is recommended that you find out about whether or not is your bicycle appropriate for such use so that you prevent possible damage of its components or frame that might result in your crash and possible serious injury.

1.5 Riding technique and adjustment of your bicycle

It is advisable first to practice riding your bicycle on a safe place, and find out how to change gears correctly and how sensitive your brakes are. Then you can start to ride moderate descents and ascents, and ride over your first obstacles. We recommend that you check both brakes and front and rear derailleurs after every ride, as these components might need additional adjustment.

Gears

There are two shifters on your handlebars; the one on the right-hand side controls the rear derailleur, the one on the left-hand side controls the front derailleur. The cage plate maintains the pull of the chain during shifting. Do not try to change gears if you do not rotate crankset.

Select low gears before riding up a hill – larger sprocket (rear) and smaller chainring (front). When riding in flat terrain or when descending, select high gears – small sprockets and large chainring. When descending, do not leave the chain on large sprocket, as

the rear derailleur may get in contact with the spokes, which will result in damage to the derailleur. Avoid extreme sprocket-chainring combinations, such as small sprocket and small chainring, or large sprocket and large chainring. These extremes could result in damage of the whole drive change system due to large skew of the chain from the chainring - cassette axis. It is very important to release the pressure that you exert on the pedals as such release allows the chain to transition smoothly between individual gears, and decreases the danger that the chain is bent or derailleurs damaged.

Braking

The left-hand brake lever operates the front wheel brake, the right-hand brake lever operates the rear wheel brake. Test the brake on a safe place first. It is necessary to get used to sensitivity of the brakes and their performance. Always have your speed under control so that you would be able to stop in various situations. Brake evenly with both brakes. After gaining some experience, use more braking power with the front brake. The front brake shares up to 85% of the total braking power. Do not use the front brake in turns, only before and after the turn.

Climbs and descents

Before you start the climb, shift a lower gear. When riding up a hill, try to remain seated which will allow you use your power more efficiently. Move towards the tip of the saddle in very steep climbs.

It is advisable to lower the seat before steep descents. For this, use the quick release bolt. By lowering the seat, you will be able to shift your centre of gravity lower towards the ground, thus improving your stability. If your bicycle is equipped with a dropper seatpost, use it to lower the seat before a descent. When in a descent, do not sit on the saddle, and unweight the front wheel as much as possible. Descending on a mountain bike may be very dangerous. Always make sure that you have unlocked your suspension so that you do not damage it in descent or cause yourselves an injury. Higher speed means greater risk, so never overestimate yourselves in descents.

Obstacles

Never try to ride over obstacles that might damage your bicycle or that might cause you to lose control over your bicycle. If you want to negotiate an obstacle, stand in the pedals and have your arms and legs bent slightly. In such position, it is easier for you to take in the impact caused by the obstacle.

Arms

They have to be in such a position to allow sufficient bending and thus absorb the roughness of the terrain. If it is not the case, decrease the height of your handlebars or lean towards the front wheel. If your shoulders and upper part of your arms get tired quickly, the problem may be dealt with by replacing your stem for a different one with a different length and angle.

Hands and wrists



Your hands must hold handlebars firmly and you could encounter possible bumps that might cause your loss of grip. In general, however, it is sufficient to hold the handlebars with your little finger and ring finger, and let the index finger and middle finger free to control the brake lever. Thumbs should grasp handlebars from below and not from above so that a sudden intensive hit does not result in you losing control over your bicycle. While riding in dangerous / technical sections, grab handlebars firmly so that the impacts were absorbed by your arms. Loose grip of handlebars will result in their movement. Even though soft grips might seem more comfortable, eventually they mean greater load and strain on your arms. Use grips made from coarser and more robust material.

Top tube and stem length

Influences control of handlebars. Ideally, you should have relaxed backbone and arms bent slightly. If you feel that your riding position is too “stretched out” (and vice versa), consult professionals in service and try to replace your stem with a shorter/longer one. You will feel relief.

Handlebars width and shape

In general, width of 64-80cm is ideal. Wider handlebars provide better transfer of power while riding standing up and better control in rough terrain and in high speed, whilst narrow handlebars provide the rider with a more aerodynamic position. There are various angles of handlebars: bent backwards, upwards, various depth of the middle section. Try the particular shape that will allow you to grab handlebars in such a way that your wrist has natural position.

Stem height and angle

The stem may have positive (upward) or negative (downward) position, allowing the rider to have either sporty (more bent) or relaxed (more erect) riding position. The length of the stem greatly influences perception of comfort and control over the bicycle. If a short stem is used, rider’s weight will be rather above the saddle; if longer stem is used, rider’s weight will shift towards the handlebars.

Feet

The instep should be aligned with the pedal axis. Special cycling shoes make pedalling easier and more effective. Always use special shoes for clip-in pedals. Never ride a bicycle equipped with clip-in pedals wearing regular shoes. Special shoes should be worn at all times as with regular shoes there is a danger that the sole will slip off the pedal, which will result in your fall and possible injury.

Torso

Keep your torso relaxed, in natural position. It is very useful to lean forward in the angle of approx. 45 degrees: this will allow the large gluteus muscles work more efficiently. This will also relieve the pressure on gluteus, and transfer it to arms.

Riding position

Do not remain seated in the same position. Shift your weight behind the seat, which will result in greater power and allow you to keep the rear wheel on the ground while descending steep slopes. On the other hand, lean against the handlebars and sit on the tip of the saddle in steep ascents. This will help you keep the front wheel in contact with the ground. Take advantage of the possibility to change seat height. If you drop it by several centimetres in rough terrain, you will avoid powerful hits of the saddle into your pelvis area. Drop your seat even lower and unweight the front wheel even more in fast descents. A great number of off-road cyclists prefer having the saddle in horizontal position. Some, however, tend to tilt the tip of the saddle down to eliminate shocks. Other tilt it slightly upwards to relieve the pressure on their arms. The imaginary vertical line from your knee towards the ground should run through the front section of the pedal. Regulate the seat position forward or backward, so that you achieve the desired result.

Kids' bicycles: Important!

- It is important that children's parents or guardians checked their child's bicycle before every ride. Before first ride (and several times after it, too), the child should be instructed how to ride the bicycle correctly, especially how to use brakes safely, i.e. that it is best not to brake sharply and to cause wheels go into a skid, especially on a wet surface.
- Some kids' bicycles are equipped with coaster brakes that is located in the rear wheel hub. Unlike all types of brakes mentioned above, this brake is not actuated by pressing brake lever, but by feet pressing against the pedal in the direction inverse to the riding direction.
- If the bicycle is equipped with stabilizer wheels, it is necessary to ride the bicycle very carefully so that it does not tip over.
- Helmets must indicate with a label on them that they have been certified properly according to relevant standards and each item must carry the approval mark.

It is of utmost importance - especially with children - that a helmet fits well on cyclist's head, and that they like its appearance, too. This is why it the best practice is to choose and buy a helmet with your child; the child will have a special relation to it, too. Furthermore, it is necessary that the child knows how to manipulate with his or her helmet. Unless the helmet is exposed to a strong impact, i.e. unless the cyclist crashes with it, the helmet may provide many years of service. However, if the helmet is exposed to impact, the foam inside the shell whose task is to diffuse the impact will disintegrate, and subsequently, the helmet must be replaced as it cannot guarantee full functionality and provide safety of your child's head.

According to statistics, the risk of death is nearly twenty times lower for a cyclist wearing helmet, and other head injuries risk is decreased as well: the occurrence of fractures decreases five times, brain damage lowers to 50% of cases, and the same applies to soft tissues. Moreover, head injuries tend to have very serious consequences as they may have



persistent effects on your health, such as epilepsy, brain damage, permanent headaches, balance disorders, concentration issues, or aggression.

One figure is a clear indicator of how important this protective equipment is: 75% of all deaths of cyclists are caused by a head injury. An adult may die after falling in speed as low as 11 km/h (approx. 7mph), if happenstance interplay is unfortunate, a child may die in speed even lower than that.



2. Maintenance of a bicycle

2.1 Installing and removing wheels

It is very important that you understand correctly how the quickrelease mechanism works. Incorrectly mounted wheels may lead to serious injuries! The quickrelease allows fast and easy installation and removal of wheels without any tools. It is advisable to position the quickrelease lever in the upward direction. If the lever is positioned in such way that it is directed forward, it may be opened accidentally, e.g. by a branch. Correct tightening of the quickrelease lever means that you feel resistance in about 1/3 of the lever's travel. You should confirm correct tightening of the quick release by lifting the whole bicycle up (about 10cm above the surface) and letting it drop down. An unnatural sound will indicate play in either of wheels. Regularly check tightness of quickrelease mechanisms, as they may "set down" after some time, which means that the interconnection of wheels and frame/fork may not be as good and safe as it used to be previously. Check tightness of quickrelease axles and their mechanisms in frame or fork. Cables of both brakes must be released (if your bicycle is equipped with rim brakes) before the actual wheel removal. Press both brake arches towards the rim and unhook the end cap of the metal cable guide from the cable hook unit. This will allow you to spread out the arches away from one another, and thus increase the space for the wheel to be taken out

With disc brakes, there is no need to do anything like this; once the wheel is out of the dropouts, be careful not to press the brake lever. This would cause the brake pads press against each other, making it very difficult to reinstall the wheel. If this happens, it is very likely that you will need to have your brakes serviced. If you transport your bicycle with front or rear wheel removed, use bleeder caps with your hydraulic disc brakes. The bleeder cap is a plastic spacer provided with your bicycle that is inserted into the brake body instead of rotor. Inserting the bleeder cap will prevent brake pads from touching one another in case the brake lever is pressed accidentally.

Mounting and removing front wheel

Open the quickrelease lever and loosen the nut on the other side (2-3 revolutions). This will loosen the front wheel in the fork. Now you only need to lift up the front wheel; sometimes, it might be necessary to knock the wheel slightly. When mounting the wheel, bear in mind that the quickrelease lever must be tightened sufficiently towards the fork. Reinstall the brake cable. Spin the wheel and check if the brake shoes do not get in contact with the tyre, or if brake pads do not rub the rotor. If they do, remove the wheel and reinstall it carefully into the dropouts of the fork. If your bicycle is equipped with a thru axle, always comply with the correct method of its release, loosening and pulling out of the fork and hub. Once you have reinstalled the wheel in the fork, make sure that the wheel sits firmly in the fork.

Mounting and removing rear wheel

First of all, shift such a gear that uses the smallest sprocket of the cassette. Open the quickrelease lever. Lift the left side of the rear wheel in the rear stays and pull the lower part of the rear derailleur backwards with your right hand. This will release the rear wheel from the dropouts. When installing the rear wheel, bear in mind that the chain should be on the smallest sprocket. Make sure that the axle of the wheel is positioned correctly in the dropouts of the rear stays. Reinstall the brake cable. Spin the wheel and check if the brake shoes do not get in contact with the tyre, or if brake pads do not rub the rotor. If they do, remove the wheel and reinstall it carefully into the dropouts of the frame. Make sure that the rear derailleur works correctly. If your bicycle is equipped with a thru axle, always comply with the correct method of its release, loosening and pulling out of the frame and hub. Once you have reinstalled the wheel in the frame, make sure that the wheel sits firmly in the frame. If you transport your bicycle with front or rear wheel removed, use bleeder caps with your hydraulic disc brakes. The bleeder cap is a plastic spacer provided with your bicycle that is inserted into the brake body instead of rotor. Inserting the bleeder cap will prevent brake pads from touching one another in case the brake lever is pressed accidentally

2.2 Brakes



CAUTION: Always check that the entire brake system is working properly before each ride. If any part is damaged, do not ride the bicycle!

Brake system: An overview

The brake system consists of brake lever, brake caliper/arms, rotor, cable and Bowden cable (hydraulic hose). LEVIT bicycles may be equipped with several types of brakes: “V-brakes” and disc brakes. It is important for you to know what type of brake is on your bicycles, and what are its requirements regarding maintenance and adjustment.

Brake lever – rim brakes

The brake lever should be always mounted firmly on handlebars. If pressed, the lever should never get in contact with the handlebars. If it happens, the brake cable must be stretched correctly or brake shoes replaced. The angle of the lever (relative to the ground) can be adjusted by loosening of the bolt of the clamp, adjusting the lever into correct position, and subsequent tightening of the clamp bolt. Furthermore, the lever can be adjusted to fit the palm of your hand (i.e. length of your fingers). This is usually done by a bolt or allen bolt located opposite the lever that enables setting of the distance of the lever from handlebars.

Brake caliper

The caliper consists of two bridges/arms. Check regularly that the brake calipers/arms are centered correctly. If it is not, an experienced mechanic should do as follows:

1) Check if the wheel is set correctly in the fork dropouts; or 2) adjust the brake by adjusting screws located on the side of the brake. Every cyclist should be capable of performing at least basic adjustment of brakes. Major repairs, such as stretching of cables, their replacement or replacement of brake should be left to experienced mechanics.

Why is it that you should be capable of performing basic brake adjustment?

Here are the reasons:

- 1) Brake cables slack with time, which causes an increase of distance between brake shoes and the rim. When slack appears, the brakes must be adjusted by tightening the cable.
- 2) Brake shoes get worn out or harden after some time, and it is necessary to replace them.

The distance between the rim and brake shoes can be set in two ways. The cable can be made taut by rotating the adjusting knob on the brake body (screwing it out to some extent). This will result in brake shoes getting closer to the rim. However, this method may not be sufficient in some cases, and then it is necessary to tighten the cable in the brake. Also, correct function of brakes depends on condition of wheels. If wheels have a significant play, are bent or wobble from side to side or up and down when spun, it will be necessary to adjust or true (center) them. Wheel truing is not an easy task to do, and it is advisable to leave it to a skilled mechanic. Rims get worn out with time too, and it is necessary to replace them. Your mechanic will tell you when is the right time to have your rims replaced. If your rims are worn out too much you run the risk of the wheel failing entirely, which may result in sidewall failure, defect, crash and a possible serious injury.

Noisiness of wheels may be caused by insufficient or improper adjustment of brake shoes. The shoes should touch the rim on its front side (i.e. in the sense of the wheel rotation). There should not be a gap of more than 2mm between the rim and the rear part of the brake shoe.

Cables and Bowden cables

Check your cables and Bowden cables regularly. Note if cables are frayed or worn, Bowden cables bent sharply or cracked.



WARNING: Adjusting the handlebars height and their replacement for a different piece may impact adjustment of your brakes, so it is necessary to do a thorough check before your ride!

Disc brakes

Some LEVIT bicycle models are equipped with disc brakes that fall into two basic groups: mechanical disc brakes, and hydraulic disc brakes.



CHECK THE FOLLOWING ON MECHANICAL BRAKES:

1. Mechanical disc brakes require a certain amount of time to wear in; only then will they be able to provide their maximum performance. See instructions below.
2. Inspect cables and Bowden cables if they have been bent sharply or broken. Brake levers should never touch handlebars, even when pressed as much as possible.
3. The moving piston should bend the rotor so that it touches the adjustable piston on the other side; the rotor must never get in contact with the brake housing. Check that the moving brake pad is extended out sufficiently; if at a loss, consult your service.

CHECK THE FOLLOWING ON HYDRAULIC BRAKES:

4. Travel of the brake lever. If the brake lever feels too “spongy”, the system has excess air in it. It is necessary that the brake system be bled. Have this done by an experienced mechanic.
5. Inspect the brake hose if they are not bent too sharply in some places, if they do not show signs of cracking, and that they do not leak. Incorrect function of hydraulic brakes can be caused by worn or damaged hoses. All repairs and maintenance tasks carried out on hydraulic brakes require special tools and skilled mechanic. Unprofessional manipulation with the fluid braking system may be very dangerous.

ALL DISC BRAKES REQUIRE THAT THE FOLLOWING PARTS BE CHECKED:

6. All braking systems must be “run-in” first; only after they have been run in are they capable of providing you with maximum performance. With a new bicycle, new brake or after you have replaced brake pads, ride your bike on a safe and level place without traffic. Try to brake about 20 to 30 times. Gradually increase the pressure on brakes.
7. Keep rotors clean. Bear in mind that rotors must not get smeared with grease. If it happens though, it is necessary to clean the rotor and brake pads with a special agent (containing alcohol or special brake cleaner), or replace the brake pads completely.
8. Check the surface of rotors. Deep scratches, grooves and nicks are undesirable. Replace damaged rotors immediately. The rotor must always be firmly attached to the hub flange. If it can be moved on the hub flange, check that its bolts or central nut are tight, or leave it to professionals.
9. Check the condition of brake pads. They should look like having a glassy surface due to heat during braking; the braking power is greatest with pads in such condition. Pay attention to the fact that brake pads and rotors should be clean. Check if they are worn away evenly. Replace damaged brake pads.
10. Rotors should run between brake pads. If brake pads rub against the rotors, it is necessary to loosen the mounting bolts, press the brake lever and tighten the mounting bolts again. If the rotor wobbles from side to side, it must be straightened in a special tool or using a rubber mallet. You can leave this task to a skilled mechanic.
11. When using disc brakes, it is very important to check the correct tension of wheel spokes as disc brakes put the spokes under greater stress than rim brakes. If you

encounter any of the aforementioned problems, do not ride your bicycle and have it inspected, adjusted,

12. or repaired by a skilled professional. Unreliable brakes may result in rider's fall and possible injury.



Also, braking is based on friction of two materials that generates considerable amount of heat. Rotors remain heated for a certain period of time. Therefore, never touch the rotors after they were engaged in braking, otherwise you run the risk of burns. Sharp and long braking may cause the rotor to become very hot; this may decrease efficiency of the whole brake system, and even damage to the rotor. Learn to use your bicycle's brakes correctly. Braking sharply with your front brake may result in fall and injury. If your brakes are not adjusted correctly, or if you do not use them in an appropriate manner, you run the risk of a serious injury!

2.3 Gear shifters

Gear shifting system: An overview

Gear shifting system consists of components that allow the user shift individual gears. The system is made up of rear and front derailleurs, lever shifters or twisting shifters, in some cases, Bowden cables with cables in them, and a chain. Springs are an inseparable part of both front and rear derailleur. The spring inside the derailleur pushes it towards the smallest sprocket, whilst the cable pulls it towards the largest sprocket.

This means that if you press the shifter lever on the right-hand side of the handlebars (or twist the twisting shifter towards yourselves), the position of the chain changes, and it jumps from a smaller to a larger sprocket. If you press the smaller lever on the right-hand side (or twist the twisting shifter away from you) the chain will jump from a larger to a smaller sprocket. Some Shimano derailleurs offer a standard that works in the opposite direction, i.e. the spring pushes the rear derailleur towards the largest sprocket, and so the shifting levers press against it, towards the smallest sprocket.

Change gears only when pedals are in motion forward. Never try to change gear without pedalling, or while rotating the cranks backward. Never try to use force while shifting. Never lay your bicycle on its right-hand side, as this might damage the rear derailleur or bend the hanger that the rear derailleur is mounted to.



WARNING: it is very likely that you will be capable of performing the basic adjustment of drivetrain system yourselves, however, major repairs and maintenance, such as replacement of chain or cables should be left to a professional. A specific description of individual repairs and maintenance tasks of the gear changing system is beyond the scope of this manual.



A need to adjust shifters

The cables that operate the rear and front derailleurs slacken with time, and then the system must be adjusted. The adjustment is necessary to carry out if shifting is slow, difficult or noisy, or if the chain keeps falling or rubs against the front derailleur cage. Adjusting the front derailleur is difficult if the rear derailleur has not been adjusted first.

Adjusting bolts (located where the Bowden cables enter the shifters) are usually used to adjust the front and rear derailleur. A bolt located on the rear derailleur housing can be usually used. Major adjustments require that the actual cable be tightened or loosened. Adjustment of the system is described in detail below.

Shimano lever shifters

Levers on the right-hand side operate the rear derailleur. Pressing of the larger lever will move the chain from a smaller to a larger sprocket. If you use your index finger to press the lever opposite, the change will move from a larger sprocket to a smaller one. Some Shimano lever allow shifting to a smaller sprocket by moving the smaller lever in both directions. The system works reversely with a derailleur with reverse action spring: the smaller lever allows the user shift a larger sprocket. Levers on the left-hand side operate the front derailleur. Pressing the larger lever will move the chain from a smaller chainring to a larger one, pressing the smaller lever will work conversely.

Sram Grip Shift, Shimano Revoshift twisting shifters etc.

Twisting shifters are operated in a different way than shift levers. The right grip controls the rear derailleur. Twisting the shifter towards yourselves will move the chain from smaller sprocket to a larger one, twisting it in opposite direction will move the chain from larger sprocket to a smaller one. It is very similar with the front derailleur and the twisting shifter on the left-hand side. Twisting the grip towards yourselves will cause movement of the chain from smaller to larger chainring (and vice versa in reverse direction). Combination of these shifters and a reverse action rear derailleur means that the rear derailleur works conversely, i.e. twisting the shifter towards the rider will move the chain to a smaller sprocket.

Rear derailleur

Shift so that the chain is on the smallest sprocket. Stand behind your bicycle and find out whether or not the small sprocket and the rear derailleur cage plates with both jockey and idler between them are aligned in one vertical line. If this is not the case, the hanger of the rear derailleur may be bent. It may also be that the frame is bent.

A slightly slack rear derailleur cable can be tightened by small adjustment bolts on the shifter or derailleur housing. If such tightening is not sufficient, it is necessary to tighten the cable itself. Change gears so that the smallest sprocket is shifted, loosen the cable anchor bolt on the rear derailleur. Tighten the limit adjusting bolts in the rear derailleur housing and on the shifters, pull the cable with pliers, and tighten the cable anchor bolt. Overstretched cable may result in difficulties to shift smaller sprockets

and vice versa, which means that the whole system must be fine-tuned either by changing of preload of the cable in the cable anchor bolt, or by two limit adjusting bolts on the rear derailleur or shifters.

The two limit adjusting bolts on the rear derailleur housing are used for defining its maximum excursion on the largest and smallest sprockets. This will prevent the chain from falling below the smallest or largest sprockets (towards the frame, or towards the spokes).

Rear derailleur.

The outer side of the front derailleur cage plate should be nearly parallel with the largest chainring. Lower edge of the outer side of the front derailleur cage plate should be located approximately 1-3mm from the largest chainring's teeth. Shift to the smallest chainring and the largest sprocket. Using the adjustment bolt, adjust the maximum limit of the front derailleur excursion towards the frame. The chain should be located about 1- 1.5mm from the inner side of the front derailleur cage plate.

Now shift to the largest chainring and the smallest sprocket. Set the maximum limit of the rear derailleur position on the largest chainring with the second adjustment bolt. Function of these adjustment bolts may differ on various types of derailleurs, and it may happen that the inner side sets the lower limit of the front derailleur and vice versa. Therefore, it is recommended to test the functionality first.

Gear changing system's cables and Bowden cables

Regularly check gear changing system's cables and Bowden cables. Unnatural bends and folds, cracks and fraying prevent the whole system from working optimally. If you detect any similar problem, do not ride your bicycle and leave the repair or replacement of damaged cables and Bowden cables (including subsequent adjustment) to professionals. Bowden cables may clog with dirt and dust after some time, which will result in worse function of shifting. Lubricating Bowden cables and cables (or their replacement with new ones) can make the whole system work great again. While washing your bicycle, avoid applying water where cables enter Bowden cables.

Chain

The chain transmits the forces of the rider on the rear wheel, and is one of the most stressed components of a bicycle. It is very important that you keep the chain clean and lubricated. Before lubrication, the chain must be always cleaned carefully. Sand and tiny specks of dust that stick to the chain during ride dramatically decrease its lifespan. Correct and regular maintenance significantly increases lifespan of sprockets, chainrings and both front and rear derailleur. Riding will cause the chain to "slack" with time. It is then necessary to replace it. Not replacing the chain in time might result in damage to chainrings and sprockets (it will cause deformation of individual teeth). Having your chain measured regularly is a must!

2.4 Headset, handlebars, stem, seat and seatpost

Headset

LEVIT bicycles are fitted with either quill or a-head stems designed for threadless and threaded headsets. Before attempting to set your headset, it is important to know what type of stem and headset is used on your bicycle.

THREADED HEADSET

Threaded headsets consist of cups, bearing retainers, adjustable cup, lock washer, bottom cone and lock nut. It should be dismantled, lubricated and set again at least once a year. Hits and shocks during ride may loosen the headset. Correct tightening of the headset can be confirmed in the following way: first press the front wheel brake, hold the head tube with headset in the palm of your hand, and move the bicycle forward and backward. If you feel any play in the headset, if you hear any clicks or rattling, the headset should be adjusted and set.

Basic adjustment is carried out in the following way: Use appropriate wrench to loosen the lock nut and gently tighten the adjustable cup (it should be possible to move the handlebars from one side to another). Tighten the lock nut, and if necessary, tighten the adjustable cup in the against the lock nut.

THREADLESS HEADSET (A-HEAD)

It is very similar to threaded headset. Unlike the threaded headset where the headset is tightened by the means of a threaded nut, the A-head headset is held together by the stem and no thread is used. Setting of the entire threadless headset can be easier.

If you want to tighten the threadless headset, loosen the bolts on the stem. There may be one bolt, two, or even three of them. Now tighten carefully the bolt in the stem cap that runs to star nut in the steerer tube. Eventually align the stem so that it is linear with the front wheel, and tighten any bolts on the stem (one, two or even three of them). Correct setting of stem is not easy. If you have any problems, have this done in professional service. In lightweight stems, overload of bolts may result in their destruction, fall of the rider and their injury, so always proceed carefully and stick to particular torque values, if stated.

Handlebars and stem

Chapter 1 describes how to set, adjust and check stem and handlebars.



2.5 Wheels, tires, pedals, hubs and bottom bracket

Wheels and tires

See chapter 2.1. Check pressure in tyres by pinching them between your thumb and index finger; the tyre should be firm enough. Respect the maximum permissible pressure that is stated on the tyre sidewall. It is common that inner tube leak air with progressing time, and thus it is important to check the pressure in your tyres regularly.

If you use high pressure compressors such as those located at petrol stations, it is quite easy to inflate your tyres too much.

Overinflation of tyres may result in damage to both tyres and inner tubes.

When purchasing a new inner tube, pay attention to the size of valve. Your use of particular valve depends on what type of rime you have on your bicycle, or type of valve opening in your rim.

Checking your wheels

Check your rims before every ride: any cambers, cracks and grooves are undesirable. Furthermore, check correct truing of your wheels.

Flat tyre

A flat tyre may happen any time. Therefore, it is advisable to have on you proper tools to fix possible punctures. When dealing with a flat tire, proceed in the following way: After you have removed the wheel from the frame or fork dropouts, pull out of one of the tyre sides from the rim. This can be carried out with hand only, without any tools.

If it is necessary to use tools, it is advisable to use special tyre levers. Never use flat tip screw driver or other sharp tools as these may damage the inner tube. Always start on the opposite side of the valve. After you have removed the tyre, pay attention to the inner tube, and particularly to the valve. Small punctures can be fixed on the spot; follow the instructions in the tyre patches set. Larger punctures must be resolved by replacing the entire inner tube (many cyclists have a spare inner tube with them when out on a ride).

Check the inside surface of the tyre before inserting the tyre into the tyre again. Be careful: an object that pierced the tyre may be very sharp and may hurt you. After you have carried out the check, fit one side of the tyre on the rim. Then, insert the inner tube, stick the valve through the opening in the rim, and align it so that it is perpendicular to the rim. Start fitting the other side of the tyre at the valve. Proceed from the valve towards yourselves, on both sides simultaneously. It is recommended to push the valve as much inside the hole as possible, as this will prevent pinching of the inner tube between the rim and the tyre bead around the valve. Inflate the inner tube slightly and align the tyre. Once the tyre is aligned with the rim, inflate the inner tube with the recommended pressure.

Pedals

The right and left pedals have different threads, and therefore it is necessary to mount the correct pedal into the correct crank arm. Pedals are usually marked as L (left) and R (right), and the left pedal is attached to the left crank arm (the side without chainrings). The left side pedal has a left-hand thread (tighten in the counter-clockwise direction), the right is installed by tightening in the clockwise direction.

Bicycles equipped with clip-in pedals require additional maintenance. Pedals should be kept clean and their clip-in mechanism should be lubricated regularly. Good care will result in better function and longer lifespan. Preload (the force that you need to clip in the pedal or clip out of it) of spring in clip-in pedals can be adjusted. The preload is set by a small allen head bolt (two-sided pedals have one on each side). Some clip-in pedals have an index showing preload of the spring mechanism.

Hubs

Check stiffness and firmness of the wheel by moving them from side to side. If the hub does move relative to the axis, it must be tightened and adjusted. The adjustment and maintenance must be carried out using special tools. Therefore, leave these tasks to a professional mechanic. When inspecting hubs for possible play, check that quickreleases are tightened sufficiently. Sometimes, the whole hub may move in the frame or fork and it does not mean any slackness of bearings. If bearings demonstrate any play, it must be dealt with in a timely manner, otherwise the hubs may suffer irreversible damage.

Bottom bracket

LEVIT bicycles are equipped with sealed bottom brackets. If the bottom bracket does not rotate freely, you feel any play in it, or it emits unnatural sounds, it should be replaced.

2.6 Suspension fork and rear shock

Suspension fork

Most models of LEVIT bicycles are equipped with a suspension fork that is designed to absorb shocks from uneven ground, and allows a better contact of the bicycle with the ground. Many cyclists think that their fork is too soft after riding with it for the first time. Remember that the construction and design of suspension forks provides your ride with greater comfort as the fork absorbs the shocks from the uneven ground.

A less sensitive fork (stiffer) will be needed only if your fork reaches its bottom often. In some types of forks, stiffness can be changed by increasing pressure in its air chamber, in others some components (harder/softer spring coil) must be replaced. Some forks allow their users to set the fork stiffness by adjusting preload of the spring coil. This is done with a dial on the fork crown.

Rebound regulation reduces excessive bounce of the front wheel from the terrain. Some forks are equipped with a two-level regulation of the compression sensitivity: for slow compression during braking or riding in standing position, and fast compression caused by bumps and hits from the ground. Complete lockout of the system is present on some fork models (even the cheaper ones); the fork suspension is locked by a lever on the crown, or with a remote control located on handlebars. Always carefully read the instruction manual supplied with your fork to be able to reach its full potential. Never venture into rough and technical terrain with a locked fork; this causes unnecessary damage to components and bushings inside the fork.

To secure flawless and smooth operation of the fork, it is necessary to maintain its stanchions clean and lubricated (do not use lubricants containing Teflon). Leave any other repairs and maintenance to an experienced mechanic! While spraying stanchions with lubricant, always pay attention not to stain the rim (rim brakes) or rotors (disc brakes). Do not apply water on seals of the fork while washing your bicycle, so that the water does not leak inside the fork.

Rear shock

Fully suspended models of LEVIT bicycles use one of two types of suspension unit (rear shock) – coil and air spring. The former usually enables easy regulation of coil hardness with a nut located on one end of the coil spring. Damping is usually hydraulic. The latter type has air spring (air chamber) that allows you to regulate suspension by the means of pressure of air inflated in the chamber. This pressure must be checked regularly. The rear

shock contains a small amount of highly pressurized air. A special shock pump is used to achieve optimum pressure in the shock (depending on weight of the rider). It is advisable to have the adjustment carried out by a professional mechanic. When setting or adjusting your rear shock, always refer to its manufacturer's instructions valid for the particular type that you have.

Preload setting of the rear suspension unit - rear shock

Preload defines stiffness of the suspension unit, i.e. how much is the rear shock compressed when the rider is just sitting on the bicycle. The rear shock not only absorbs hits, but also secures that the wheel rolls on the ground thanks to the initial compression. Thus better traction of the wheel is achieved. Optimum initial compression is 15-30% of the total travel. As stated above, it is done using a nut (coil spring type), or by changing pressure in the air chamber (air type). The degree of sag is stipulated under static load of the bicycle: you simply get on your bicycle, have your weight distributed like you would when riding and then you check how much the suspension compressed. Optimum sag is 15-30% of the entire shaft length.

Damping setting of the rear suspension unit - rear shock

The second part of the rear suspension setting consists of setting of damping (rebound regulation). This setting will define how fast (or slowly) will the rear shock return from compressed state to its original length. If your rear wheel bounces a lot while riding, the return is too fast. On the other hand, if it returns too slowly, the rear stay may feel like there is no suspension at all. Most rear shocks have an adjustment dial on their bodies, and rotating this dial will make increase or decrease speed of oil flow through the shock chambers. This will result in faster or slower return (rebound) of the shock to its original length. If front and rear suspension stiffness are set correctly, you can feel that both of these units move evenly when loaded while you are standing up on the bicycle and ride it with crankset in horizontal position.

Compression speed setting

It is possible to set compression speed on some shocks and forks. Compression speed means the rate at which your shock compresses under force (an impact, you pressing down on it, etc.) Various types of terrains or change of weather (temperature) require the whole suspension system of a full-suspension bicycle to be fine-tuned. Your mechanic should also not forget to lubricate pivots and bearings of the rear stay correctly, too. Check that pivots are tightened correctly and search for possible play of rear stay or rear shock pivots. If you detect any play of pivots, if they drag, or if you hear any "clicks" in the system while pedalling, have them checked in service or replaced completely, so that your rear shock does not get damaged.

2.7 Cleaning, lubricating and storage

Cleaning

In order for the bicycle to retain its perfect functionality, it is very important to keep it clean. Dirt and dust damage moving parts of the bicycle in particular, i.e. components like chain, chainrings, sprockets, both derailleurs and rims. If you ride in mud, it is necessary to wash your bicycle thoroughly after every ride.

High-pressure water cleaners are not suitable for cleaning of your bicycle as water may penetrate bearings, and the high pressure is capable of washing away lubricants and vaseline. The best results are achieved by washing the bicycle by hand. Never wipe your bicycle without making it wet first, otherwise the varnish of the frame and surface of components may get scratched.

Several tips for bicycle cleaning

Splash your bicycle gently with water from a hose. Then use fine brush and lukewarm water. Use a special cleaner to clean the chain; proceed in accordance with its instruction manual. There are very practical mechanical bicycle chain cleaners that can be used to clean the chain. After the chain has dried off sufficiently, re-lubricate it. Special products (such as Dirtwash or CykloStar) that you spray on dirty or greased surface and wash away subsequently make cleaning of your bicycle easier. Bicycle washing is a perfect opportunity for inspection of the entire bicycle. Check its braking and shifting systems, suspension elements, and make sure that all bolts and nuts are tight.

Tools necessary for basic bicycle maintenance tasks:

- 8mm, 9mm, 10mm and 15mm open end wrench (thin type)
- 2.5, 3, 4, 5, 6, 8, 10, 12mm allen key
- torx keys (stars)
- slot and cross / Phillips screwdrivers
- Pair of pliers
- set of inner tube patches, tyre levers
- inflation pump, preferably with a manometer



WARNING: Tools required for maintenance are not included with the bicycle purchased!

Additional useful tools:

- chain rivet tool
- crank puller (incl. appropriate open-end wrench)
- truing key
- cassette locking tools or special sprocket removers



- combination wrench 14 (15) mm
- wheel truing stand
- chain and sprocket checkers
- rotor truing fork
- torque key

Many service tasks and repairs require professional skills and tools. Never proceed to carry out any modifications on your bicycle if you have any doubts about your ability to finish the operation. Any service that is not throughgoing may result in damage to the bicycle or an accident with possible injuries or even death.

Lubrication

Pay great attention to all moving parts of your bicycles, especially to the chain. Lubricants intended for cars and motorcycles are not suitable for use with bicycles. It is advisable to lubricate the chain in the evening, as the lubricant will have enough time to spread all over the chain. In the morning, it is recommended to wipe the excessive lubricant with a cloth, which can prevent dirt from sticking on the chain to some degree.

Lubrication and cleaning of suspension forks and rear shocks should be carried out regularly and in timely manner, i.e. always after approx. 50 hours of riding or immediately before the next ride (if the bicycle was ridden in difficult conditions – water, mud), to prevent permanent damage to the fork. If your fork is equipped with dust caps, remember to clean their insides, too!

Do not lubricate front and rear derailleurs too much. If excessive amount of lubricant is used on these two components, dirt gets stuck in them more easily, and this results in worsening of their operation.

Avoid applying the lubricant on rims, brake shoes or disc brake rotors – this could be very dangerous. It is also advisable to lubricate pivots of brake pads and calipers in due time. Never apply lubricant on disc brakes!!!

Lubrication of cables and Bowden cables, hubs, headsets, bottom brackets and pedals is best to leave to a skilled mechanic. It is necessary to completely disassemble these components, clean them, lubricate them, assemble again and set.

Storage

It is not advisable to leave the bicycle exposed to effects of weather. Keep it protected from rain, snow and sunlight. When storing the bicycle for an extended period of time, keep the bike suspended as this will prevent damage of tyres.

Do not lay your bicycle on its right-hand side as doing so could damage rear derailleurs and result in fouling the chain.

2.8 Maintenance schedule

Deliver your LEVIT bicycle to your dealer for warranty check within one month from its purchase or after riding it for about 100km. This will secure correct function of all components. If you ride your bicycle often, and mainly in rough and sometimes muddy terrain, stick to the following maintenance schedule:

After every ride

- Check functionality of brakes, shifting and suspension fork.
- Check that wheels rotate smoothly, and that handlebars and chain move smoothly.
- Check quick release bolts.
- Check the hydraulic brake system for leaking.

Every week or after 200km

- Check pressure in tyres.
- Lubricate chain.
- Check that wheel rims are dished (trued).
- Check tightness of all bolted joints.
- Check tightness of rim brake cables, check wear of brake shoes.
- Check wear of brake pads and truing of the rotor (with disc brakes).

Every month:

- Wash, dry and preserve your bicycle, inspect the bicycle thoroughly.
- Check slackness (stretch) of the chain with a chain checker (after 700km ridden), replace slack chain.
- Clean the chain and all sprockets; once dry, lubricate them again.
- Inspect tyre thread and sidewalls for wear and damage.
- Check wear of brake shoes (brake pads).
- Check if the fork does not leak oil.
- Check the pressure in suspension fork (rear shock), increase the pressure by inflating the air if necessary.
- Check correct tightening of the saddle, seatpost and wheels quickrelease bolts.
- Clean suspension fork stanchions above seals and
- then lubricate them with silicone oil in spray.
- Clean the rear shock shaft and lubricate it with silicone oil in spray.
- Lubricate brake lever pistons.
- Lubricate brake pistons.
- Lubricate pistons of both front and rear derailleur.
- Lubricate the openings of Bowden cables.

Every 3 months:

- Check tightness of bolts and nuts.
- Clean seat tube, possibly grease it slightly so that it does not squeak In case the



bicycle is equipped with a carbon seatpost: clean and if necessary, use a special product that eliminates any cracking and prevents the carbon seatpost from slipping into the seat tube.

Every 6 months:

An experienced professional should carry out a complete service:

- An experienced professional should carry out a complete service:
- True (center) the wheels.
- Lubricate and adjust brake Bowden cables and cables.
- Replace worn brake shoes or brake pads.
- Lubricate and adjust Bowden cables and cables between shifters and both derailleurs.
- Lubricate hubs.
- Lubricate brake caliper/arms pistons.
- Lubricate headset.
- Lubricate the bottom bracket and check it for any play.
- Replace chain if necessary (if you fail to replace the chain in the right moment, it is likely that you will need to replace chainrings and sprockets too).
- Check brake pads of disc brakes and replace them if necessary.
- Lubricate bearings in pedals.
- If necessary, replace brake fluid in disc brakes (once in 24 months is enough) or bleed the whole brake system.



A bicycle and all its mechanical components are subject to wear and are exposed to great mechanical stress. Various materials and components may react in various ways to wear or stress. If a projected lifespan of a component is exceeded, the component may fail suddenly, and possibly cause an injury to the rider. Any breaches, cracks, grooves or discolouration on places that are exposed to great stress usually indicates that the projected lifespan of the particular component has been reached, and the component must be replaced. The manufacturer is not responsible for any damage of property or persons caused by operation of a bicycles, especially for damages caused by unprofessional handling or maintenance.

Bear in mind that the risk that your hair, fingers or any other part of your body may be caught or squashed by rotating parts (such as rotors, cassette or chain) is increased during regular use and maintenance of your bicycle.

3. Warranty coverage

Warranty is provided for flaws and defects that the item sold has when taken by the customer. It is important to use original components only, especially as parts that are critical for safety of the cyclist (front fork, handlebars, stem, seatpost, brake shoes and brake pads and their holders/mounts, Bowden cable lines, hydraulic brake hoses and brake levers).[

Recommended tightening torques for bolts. Torques are presented in newtonmetres (Nm):

- Stem-handlebars joint: 4–8
- Quill stem: 5–8
- Seat lock with one bolt: 17
- Seatpost clamp: 4–8
- Pedals in a crank arm: 35
- Wheel nuts: 20–25

3.1 Warranty related to individual parts

Frame and fork

The warranty covers the material, its joints and corrosion. In essence, it cannot be claimed in relation to damages caused by accidents or unprofessional repair. It is absolutely necessary that the frame has its original lacquer. The manufacturer cannot bear any responsibility for manufacturing processes of other companies (sanding, baking of new lacquer etc.).

Suspension forks and rear shocks

The warranty covers material and manufacturing defects that are present in the product in the moment of its takeover by the customer. Flawless geometry of lower fork legs and stanchions is the main criterion for acceptance of a snapped fork warranty claim. Flaws such as emergence of play cannot be claimed under this warranty, if there is any water or dirt in the fork that causes the damage, if the fork steerer is bent, or if the fork's crown was damaged in an accident or due to excess stress. Defective suspension or any other damage caused by riding in difficult terrain with suspension elements being locked is not covered by this warranty.

Defects of the rear suspension that compromise the correct geometry of the suspension unit (accident or overload due to improper or inadequate setting) and air or oil leakage caused by dirt and water permeating the seals and gaskets, scratches and dents on stanchions or shaft, and corrosion cannot be claimed under this warranty.

Steering

The warranty covers defects and flaws of material. Deformities of fork steerer tube caused by excessive use of force while tightening the stem, or deformities of stem caused by extending it above the maximum extension mark will not be covered by this warranty.



The operation of a bicycle requires play of the headset to be checked and set – damaged, corroded or soiled bearings will not be covered by this warranty.

Bottom bracket

The warranty covers material flaws and its heat processing. Common play adjustment is not included in warranty repairs provided by this warranty. In addition to that, deformed or removed threads in components and damaged various types of crankset mounts (spindles) used. Damaged bearings and corroded parts are not covered by this warranty. Check for possible slack or loosening, and deal with them in timely manner.

Pedals

The warranty covers evincible material flaws. Wear and tear by use, loosening or fracture of the pedal frame joints or bending of pivot caused by an impact are not reasons to accept the claim under this warranty. Noisy pedals and play adjustment is not covered by this warranty, but is a subject of warranty service. Pay attention to loosening of moving parts in clip-in pedals; check their correct tightening. This warranty does not cover loss of loose parts.

Wheels

General warranty covers material flaws (cracked rim, hub, sprocket, axle) including defects of coating/finish. Operational play and noise of the sprocket will be covered by the warranty on condition that the sprocket is functional. Damaged bearings, dirt in the freewheel, hub bearings and corroded parts are not covered by this warranty.

Brakes, shifters, front and rear derailleurs

Warranty covers material flaws. The warranty excludes adjustment and setting of components. It may change during storage, manipulation and riding, and adjustment of individual components is a part of standard maintenance. Changing gears, especially when it comes to front derailleur levers, requires certain feel for it. This warranty does not cover any possible damages of the shifting mechanism due to insensitive shifting.

Seat, seatpost

Material flaws are admitted, and are assessed based on fulfilment of the seatpost's function. Grooves and scratches caused by movement of the seatpost in seat tube cannot be claimed under this warranty. Warranty claim shall not be validated if the seatpost was extended above the maximum extension mark. The warranty cannot be claimed in cases of seatpost being bent and deformed due to an accident or overload during landing after a drop/jump, seat rails deformation, tear of the seat surface etc.

Chain

The warranty covers material defects, i.e. link ruptures. The warranty does not cover wear caused by use. The warranty does not cover cases when the chain is broken due to insensitive gear change (pin disconnection), deformed by use (rotation), worn and torn by

use (slack, prolongation), and due to neglect of proper maintenance (corrosion, jamming caused by dirt etc.).

Reflectors, chain cover, spoke cover

Components that were sheared off or broken are not covered by this warranty.

Disc brakes

The manufacturer warranty covers manufacture or material errors. The warranty cannot be claimed for damages caused by accidents, neglect of proper maintenance or unprofessional repairs. Always use the brake fluid recommended by the manufacturer of brakes that are installed on your bicycle. This is the only way to ensure flawless function of your brakes. Characteristics and features of brake fluids differ so much from one another that incorrect use may result in serious damage to the whole brake system.



3.2 Warranties

The seller (hereinafter referred to as “company”) provides the first owner of the bicycle with a warranty that is compliant with the relevant valid regulations. The bicycle frame is covered by this warranty only on condition that it has its original varnish.

Limited Warranties

The warranty does not cover defects of frames and components due to user’s fault, user’s non-compliance with the instructions in this manual, common wear and tear or use for purposes for which the frame and components were not intended (elite racing, extreme jumps and other non-standard use). The manufacturer and distributor do not have any responsibility for any injuries suffered while using bicycles and components that they consist of.

Each person themselves is responsible for damage or harm caused by irresponsible use of the bicycle and its components.



Attention! Check the frame and all components of your bicycle carefully before and after every ride.

The manufacturer hereby confirms that the bicycle of the specified type and serial number complies with relevant national standards and technical regulations. LEVIT bicycles comply with all conditions necessary for their operation in traffic.

Claims

Claims always have the character of a defect that is resolved by a component replacement, repair or professional adjustment. A repair secures customer’s further proper use of the item claimed originally.

Warranty conditions

- The bicycle must be sold assembled and in perfect condition, shown and demonstrated to the customer and ready to ride.
- The product must be used solely for the purpose for which it was manufactured.
- When claiming the warranty, the customer shall submit a complete clean bike, a validated and duly completed warranty card or the appropriate sales document (receipt)

The right to claim warranty ceases to exist

- if it was ascertained that the product had not been damaged due to manufacturer’s fault, but due to a failure on user’s part (by unprofessional repair, extreme stress or load, inappropriate storage etc.);
- if the warranty period has expired and the warranty was not claimed within this period;
- if the product has been used improperly and not maintained as stipulated in this manual;

- if validated and duly completed warranty card has not been submitted when claiming the warranty.
- Defects caused by ordinary wear and tear or excessive wear and tear caused by
- customer's failure to check and maintain their bicycle properly cannot be claimed under this warranty.

WARNING: It is highly recommended that you have your LEVIT bicycle inspected and adjusted by a company service after riding 100km or within one month of the purchase. This warranty inspection may reveal defects, and will facilitate proper adjustment and setting of components in a period following this initial use of the bicycle.

Warranty conditions related to bicycles, frames and components

The specific warranty related to LEVIT bicycles is governed by laws and regulation of the particular state or country where the bicycle was purchased.

LEVIT bicycles and frames (the frame and rear suspension) have a warranty against manufacturing and material defects that extends for a period of two years during which the bicycle is used by its original owner. The date of original purchase at a retailer is decisive. The warranty provided in the case of Dirt MTB, BMX and Enduro bicycle series does not cover bicycles purchased and used for rental purposes.

Components: The manufacturer warrants that for all other components and accessories, components of suspension, frame accessories and coating (lacquer and stickers/labels) are free of manufacturing or material faults, and provides a warranty that runs for two years from the original purchase at a retailer. This warranty, however, does not extend to suspension forks; suspension forks are covered by individual warranties of their respective manufacturers.

Warranty Conditions

Warranty expresses our responsibility for possible defects of the product. LEVIT bicycles does not provide any warranties that the product is impossible to damage or destroy, or that the capability of the product to fulfil its function is unlimited in time, regardless of the way of its use and wear and tear.

This warranty is valid for the first owner of the LEVIT bicycle and is not transferable to any subsequent owners.

In order for the warranty claim to be assessed, the bicycle must be taken to the same LEVIT retailer where it was originally purchased.

The bicycle must be fully assembled, and must be accompanied by the original sales document with date. (Keep the sales document at a safe place.)



This warranty covers bicycles purchased in fully assembled and adjusted condition at a authorized retailer of LEVIT bicycles or at other stores.

This warranty does not cover cases where the bicycle was neglected, improperly repaired or maintained, altered and modified, or which was involved in an accident or subjected to any abnormal, excessive or incorrect treatment, manipulation and storage.

The warranty does not cover damages resulting from ordinary wear and tear, including effects of material fatigue. Damage caused by material fatigue is symptomatic of a condition in which the frame is worn due to its ordinary use. This is a type of ordinary use. It is responsibility of the owner to check their bicycle and keep it in working order.

THE JOURNEY IS THE DESTINATION



LEVIT



levit.com