Electric bike user manual
Product card

TOSA BIKES

Dear user,
To ensure optimal performance of your e-bike, please read the product information carefully before using it. Using the detailed description, in the text below we will inform you about the necessary details related to the use of our bicycle. This guide will also help you resolve any ambiguities and possible glitches.

What is an E-bike?

E-bike is muscle powered single-track vehicle, which has been equipped with a pedal-operated auxiliary electric drive. It is supplied with a current of no more than 48V with a rated continuous power of no more than 250W, whose output power gradually decreases to zero, when the speed of 25 km/h is exceeded. This solution usually allows driving without the need to pedal. In general, however, an electric bike does not ride alone, it only supports the pedaling process. At 1 aprill 2011r. for the first time in Polish law a definition specifying technical requirements has appeared, which a vehicle should meet in order to be considered a bicycle. The amendment to the "Road Traffic Act" meant that a bicycle whose power or speed exceeded the limits specified in the act was considered a motorcycle. In 2012, the legislator changed the definition of a moped. As a result, an electric bicycle, which due to too high engine power, does not meet the requirements for the bicycle, may be classified as a moped. In this case, the right imposes additional obligations and restrictions on the owner, e.g. the need to register the vehicle or the prohibition to move on bicycle paths. However, there are situations where the engine is even more powerful than the moped definition provides. If this is the case, then such a bicycle is considered a motorcycle under applicable law.

Intendet use

Bikes from TosaBikes brand are intended for use on paved terrain, on asphalt roads, paved bicycle paths in parks or bicycle routes. They are also suitable for riding on rough terrain e.g .on gravel or sandy surfaces, over roots and stones. The design and equipment of some bikes in this type are not always suitable for riding on public roads. If you want to use them on public roads, you must remember about the appropriate equipment. When driving on public roads, the road traffic regulations must be observed.
WARNING!The route should be chosen adequately to your skills. Inexperienced cyclists, when deciding to ride in difficult terrain, must remember that losing control of the bicycle's bicycle may cause damage to the equipment and undefined bodily injury. . TosaBikes recommends that the technique of driving in difficult terrain should be trained on appropriate courses.
Permissible weight (total weight of the user including the bike) must not exceed 120 kg.
WARNING! In this types of bikes, it is not allowed to install bags, other additional elements for transporting luggage, or set up trailers and various types of prams. The use of prohibited equipment will void the warranty. Please read these original operating instructions carefully. If you do not understand it sufficiently, please contact your dealer directly TOSABIKES. If you have decided to buy an electric assist bicycle, please read the supplement to the original operating manual before using it for the first time.In the event that a third party is handing over a bicycle with electric assistance for use, this person must also carefully read this additional manual.. The bicycle should only be used in accordance with its intended use. Information can be found in the chapter "Intended use". Improper use may result in material damage and serious accidents or falls.
We wish you always a good jurney,

Information of the safe care with the bicycle

▪ Please read all safety rules and instructions carefullyin this original manual and in any manuals provided with it individual components and save them for future use.

▪ The bike should be prepared for riding by your dealer. Professional knowledge and specialized tools are required to perform all activities related to the adjustment, care and servicing of a bicycle. All work related to the maintenance of the bicycle should be entrusted to the TOSABIKES dealer.

▪ If you have any questions about the safe use and handling of your bicycle, please also contact your TOSABIKES dealer.

▪ The legal regulations in your country must be observed. In order to be able to use a bicycle on public roads, it must comply with the laws and regulations in force in the country of use. Please read the traffic regulations in force in your country carefully.

▪ It is necessary to bring the bicycle to a safe condition. Please read the following chapters "Before your first ride", "Before every ride" and "After a fall". Many components in a bicycle are subject to rapid mechanical wear. The bike should be regularly checked by a TOSABIKES dealer - see chapter "Service and maintenance intervals".

▪ Familiarise yourself with all the functions of your bicycle before using it, especially the brakes and the shifting system. This also applies to your child

▪ Drive slowly at night and in poor visibility, and never without lighting**.** Head lights, rear lamp and reflectors are mandatory, as is riding the bicycle to suit the particular situation. When using your bicycle, always wear clothing that is suitable for cycling, a tested bicycle helmet, protective equipment and suitable, sturdy shoes. The bicycle helmet should carry a test mark according to DIN EN 1078 – refer to the chapter on *"Bicycle equipment"*.

▪ Choose a particularly anticipatory riding style, especially when travelling at higher speeds. Twice the speed = four times the braking distance. The wheels may block and the bicycle might tip forward, especially if you take fright or brake very suddenly. Anticipatory riding and careful, appropriate braking are essential.

▪ Adjust your riding style to the prevailing circumstances. The braking distance is significantly longer in wet weather, and sudden blocking of the wheels might lead to a fall.

▪ Make certain that the frame size and operating elements are adjusted to suit your size. An incorrect frame size may negatively affect the operability and controllability of your bicycle – for instance, you may be unable to operate the brakes properly. Refer to the chapter on *"Adjusting the bicycle"*.

▪ Be considerate of other road users, pedestrians and children. Always anticipate that others may behave incorrectly. Ride considerately and do not endanger or provoke other road users.

▪ It is prohibited to operate your mobile phone or to listen to music using headphones while riding your bicycle**.** Doing so might distract you and restrict your awareness of the environment.

▪ **C**ycleways running parallel to the road present a particular source of danger. They may be overlooked by drivers turning into a corner.

▪ Cross rail tracks and manholes with particular care to avoid falling. Cross rail tracks at a right angle when possible.

▪ Only original components of the company should be used for repair and replacement of parts TOSABIKES. Zaleca się, aby przy wymianie części w Państwa rowerze używać wyłącznie oryginalnych komponentów firmy TOSABIKES, gdyż muszą one posiadać określone właściwości. W sprawie doboru części zamiennych proszę zwracać się do swojego sprzedawcy TOSABIKES.

▪ It is always necessary to protect the habitats of animals and plants. Drive only on designated paths and roads. Avoid meadows and fields and never drive through sewage or water bodies. Off-road speeds should be adapted to your abilities.

▪ Do not make any adjustments to the brake and gear while driving. During such activities the risk of falling is seriously increased.

▪ You should never go too far on your bike. The only exception is when small children are transported in a special child seat. The additional weight must be included in the maximum permissible gross weight of the bicycle. Not all bicycle frames are designed to be ridden with child seats. Overloading can deform or break the frame or its components.

▪ Never ride the bicycle without holding it. Such a ride is extremely dangerous as it is possible to lose control of the bicycle.

▪ You must never drive while under the influence of drugs, alcohol or medication, or when you are tired. Such a ride is extremely dangerous as it is possible to lose control of the bicycle.

Overview Guarantee

The warranty inspection should be carried out after 5 hours or after 100 km of using the bike from the moment of purchase. Especially during the first kilometers of driving, the screw connections, cables and spokes in the wheels are loosened.

▪ Depending on the intensity of driving, have your TOSABIKES dealer for inspection or repair work at least once a year. repairs. Otherwise, various components may fail.

▪ Should components need to be replaced, only original parts may be used

spare. The obligation of warranty service rests at the point of sale of the bicycle, also in the case of purchases over the Internet. However, we honor reviews made at any other point selected according to your preferences. We have no influence on the cost of such a review. The warranty inspection should include (the following activities must be listed on the service document or sales document):

—Adjustment of the rear derailleur
—Tightening bolts and nuts with the appropriate tightening torque (especially the frame and engine)
—Checking and adjusting any play in the controls
—Checking the tension of the spokes and centering the wheels
—Checking the crank mechanism and drive system components (in particular the cassette)
—Checking the condition of the wheel mounting
—Checking the condition of the tires (pressure, possible tire defects)
—Checking the condition of the brakes and adjusting
—Checking the efficiency and effectiveness of other bicycle components.

To maintain the warranty on components such as: Front shock absorber and rear shock absorber, the user should perform a service inspection at least every 50 hours of use or once a year. The warranty does not cover damage to the equipment resulting from improper use, maintenance or storage of the bicycle, damage resulting from excessive load on the bicycle, as well as damage resulting from random events after sale, e.g. a fall of the bicycle. The warranty also does not apply to cases resulting from natural use of the equipment, such as wear of tires, linings or brake hoses.

Before first ride

Do not exceed the maximum load-bearing capacity of your bicycle and its components. Your bicycle was designed exclusively for the use described in the chapter on *"Intended use"*.

2. Adhere to the maximum permissible weight (bicycle + rider + luggage) for which your bicycle was designed – refer to the chapter on *"Intended use"*.
3. Familiarise yourself with how the brakes work before riding your bicycle for the first time. Check which brake lever operates the brake on the front or rear wheel – refer to the chapter on the "*Brake system"*.
4. You must have understood how the gear shifting system works – refer to the chapter on *"Propulsion"*.
5. The handlebars and saddle height must be adjusted to your size – refer to the chapter on *"Adjusting the bicycle"*.
6. If your bicycle has clipless pedals, it is advisable to experiment with how to lock your shoe to the pedal and then release it again while the bicycle is stationary – refer to the chapter on *"Bicycle equipment"*.
7. Ask your TOSABIKES dealer to make all adjustments to the suspension elements immediately after purchasing the bicycle. Incorrectly adjusted suspension elements may negatively affect riding behaviour and can therefore present an elevated safety risk. It may also damage the suspension elements or the frame – refer to the chapter on the *"Suspension elements"*.

Before every ride

Your bicycle was tested several times during the production process and then given a final inspection by your TOSABIKES dealer. It is nonetheless possible that changes may have occurred on your bicycle during transport or as a result of manipulation.

1. Visually check all mounting screws. The bicycle must now show any mechanical damage in the form of deep scratches, notches or fractures. You must not notice any unusual sounds that may indicate that the screws have not been tightened properly.
2. All quick releases or thru axles on the front and rear wheel, as well as on the seat post, must be firmly closed. Check these things also if the bicycle has been left unsupervised, even for a brief period.
3. Check the condition, trueness and air pressure of both tyres. Pinch the tyre with your thumb and forefinger to check for the right air pressure. If you have one, use a manometer to determine the pressure. Refer to the chapter on *"Wheels and tyres"* for the correct procedure.
4. First check whether the brakes are working properly with the bicycle in a stationary position. To do this, pull the brake lever towards the handlebars. On no accounts may the brake lever touch the handlebars. The thickness of the brake pads must be adequate to ensure safe braking. Rim brake: The brake pad must be firmly connected to the brake. When maximum pressure is applied to the brake lever, the brake pads must engage at the correct position on the rim flank so that they do not touch the tyre. Tilting from the rim flanks towards the spokes must not be possible. Hydraulic brake systems: There must be no leakage of brake fluid onto brake system components – refer to the chapter on the *"Brake system"*.
5. The laws of the land must be adhered to in all cases if you participate actively in road traffic. Never ride the bicycle without lighting and reflectors – refer to the chapter on *"Instructions for safe handling"*.
6. To check the headset, move the handlebars alternately to the left and right, which must be possible smoothly and without clearance. Press and hold the front brake and then apply sudden pressure to push the bicycle backwards and forwards. This must also be possible without clearance or clicking sounds. The handlebars must not allow twisting relative to the front wheel – refer to the chapter on the *"Headset"*.
7. To check the suspension, lean on your bicycle and see whether the suspension elements move up and down in the usual way – refer to the chapter on *"Suspension elements"*.
8. You must fold up the bicycle stand before each ride to prevent a fall.

After a fall

If certain bicycle components were bent as a result of a fall, never straighten them. There is then an increased risk of component breakage. This mainly applies to the fork, handlebars, head tube, crank and pedals.

- The chapter "Specifics of the carbon material" provides information on how to handle components carbon - please read this chapter carefully.

External factors, falls or accidents may damage the bicycle components essential for its safety. To avoid dangerous situations while continuing to drive after such incidents, pay attention to the following points.

1. Wheels must still be in the correct position on the frame and fork attachments and show correct centering - see "Wheels and Tires".
2. The handlebars and the steering head must still be in their correct previously adjusted position and the bolt connections must still be firmly attached. To check this, block the front wheel with your knees and turn the steering wheel alternately left and right. The steering head must not twist under any circumstances during this operation. If the handlebar turns with the brake levers when you try to depress the brake levers, the bolt connection is not securely fastened - see chapter "Bike adjustment components".
3. The chain must still run on both one of the front sprockets and the rear sprocket. Under no circumstances is the bend of the rear derailleur, derailleur hanger and derailleur mount to be bent. There is a serious risk of falling if the gear shifter gets caught in the spokes. The operation of the gearshift mechanism is checked with the help of a second person, who will slightly lift the bike by the saddle, then turn the crank. Shift all gears during the check to make sure that they are working properly - see chapter "Drive".

4. Press down and pull up the saddle or try to twist it to check the screw connection between the saddle and the seat post. The saddle cannot turn or move. In this way, you can also check the stability of the seat post in the frame - see chapter "Bicycle adaptation".
5. Then lift the bike up slightly and drop it to the ground. During this operation, make sure that you do not hear any strange knocks - loose bolt connections can be identified in this way.
6. If the condition of the bicycle allows it to continue riding, ride slowly and carefully. Avoid heavy braking and sudden acceleration. Under no circumstances take any risks and do not continue driving if necessary. After a fall, the bicycle should be checked by a TOSABIKES dealer to be sure.

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Bike customization elements

The use, type of bicycle, and frame height are all factors that determine the basic position of the bicycle's rider. Various items can be customized. Individual settings can be made for the handlebars, head tube, seat post, saddle and brake levers, for example.

- The bike should be prepared for riding by your TOSABIKES dealer. Professional knowledge and specialized tools are required to perform all activities related to the adjustment, care and servicing of a bicycle. All work related to the maintenance of the bicycle should be entrusted to the TOSABIKES dealer.

Determining the correct frame height

Using the correct frame height is extremely important for safe cycling. Determining the dimensions of the frame so that it is specially adapted to the rider is possible on the basis of his height and step height measurement. When standing over the bicycle, there must be a minimum distance of one inch or 2.54 cm between the crotch and the top tube of the frame.

Saddle height and positioning

- Before driving or. each time after making any adjustments, always check that the connection with the saddle is sufficiently tightened. To do this, grasp the front and rear part of the saddle and move it left and right or. up and down. You must not feel any movement of the seat post.
- Maintain at least the minimum insertion depth of the seat post
- Avoid using brute force when inserting the seat post into the seat tube.

▪ Specialist knowledge and specialized tools are required to perform all activities related to the adjustment, care and servicing of a bicycle. All work related to the maintenance of the bicycle should be entrusted to the TOSABIKES dealer.

The height of the saddle is set correctly when the heel of the foot lies on the pedal axis and the leg is fully extended. However, when the forefoot is on the pedal axis, the leg should be slightly bent.

▪ When adjusting the height of the saddle, it is best to wear shoes that you wear on a bike trip.

▪ Please sit on the saddle. Lean against the wall while doing so.

▪ Place your heel on the axis of the pedal in its lowered position, and make sure your hips are straight.

▪ The leg should be fully extended.

To change the height of the saddle, release the quick-release lever or loosen the clamping pin on the seat post - see "Handling quick-releases" in the "Running wheels and tires" section and adjust the saddle height to the correct height. Then close the quick-release lever to lock the seat post. If a clamping pin is used to hold the seat post in place, a suitable tool is required for this. Always use a torque wrench and observe the tightening torques given in the section "Recommended tightening forces". Turning the bolt counterclockwise loosens it and the seat post can be moved. Then lock the seat post by turning the bolt clockwise. Check that the saddle is in line with the top tube of the frame). If necessary, reopen the quick-release lever / loosen the clamp bolt and adjust the position of the saddle. Each saddle must be mounted with the seat surface parallel to the ground. A spirit level is therefore helpful during assembly. Each saddle is marked with the permitted range of rail clamping. Most seat post manufacturers specify a torque which is marked directly on the seat post - see section "Recommended tightening torque". In the case of seatposts with two bolts torques must be checked alternately twice separately. The seat post must not be mounted the other way round - the seat post clamp must point towards the rear.

Handlebar height and stem settings

Handlebars and headsets are among the load-bearing elements of a bicycle, and therefore they are essential elements for safety. For all activities related to regulation and care expertise and specialist tools are required. Any work when servicing the bicycle, they should be commissioned by a TOSABIKES dealer.

▪ The selected combination of handlebar and head tube must be approved by the manufacturer.

▪ Under no circumstances should you ride the bicycle on which at least the minimum insertion depth of the steering head has not been achieved. This situation is very risky.

▪ Check the tightness of the clamping screws of the frame head or handlebar grips,

by sliding the front wheel between your legs and trying to twist the handlebar and steering head assembly all the way possible directions. If you find that this item can be twisted, report it contact your TOSABIKES dealer.

▪ The connection of the steering head with the steering tube and the steering head with the steering wheel must be properly tightened.

▪ Before each ride, it is necessary to check that the adjustable head is securely fitted.

▪ The braking test should be performed outside the traffic area.

The height of the saddle together with the height of the handlebars determines the inclination of the rider's back while riding. If the handlebars are set lower, the rider's position on the saddle is much sportier. Various types of stems are available to vary the height of the handlebars. Your TOSABIKES dealer will advise you on the correct seating position. Conventional bridges With conventional stems, the height of the handlebar is changed by adjusting the insertion depth of the stem in the steerer tube. Adjustable Bridges The angle-adjustable stem also allows you to adjust the position of the steering wheel on an ongoing basis. This is done by changing the angle of the setting up or down. Such bridges are easy to install as additional equipment. Threadless Bridge (Ahead) The threadless bridge is clamped directly onto the steerer tube. The height adjustment is only possible with spacer rings or by turning the sternum. Shortening the steerer tube can only reduce the height of the handlebars. Rotating the stem may decrease or increase the height of the handlebars.

Brakes

▪In brand new condition, the brake discs do not yet show maximum braking force and require a run-in time of approx. 30 - 100 brakings.

▪ For information on the assignment of the brake levers, refer to the chapter "Service booklet, bicycle".

▪ All braking surfaces must be free of oil or grease.

The use of the brakes must cause the bicycle to come to a stop as soon as possible. When braking sharply, try to shift the center of gravity as far back as possible.

All TOSABIKES models are equipped with two independent brakes. The brake lever factory installed on the left-hand side operates the front brake when viewed in the direction of travel, and the brake lever on the right-hand side operates the rear brake. During braking, both brakes should always be properly metered and used simultaneously. Due to the mass transfer, greater braking force is applied to the front wheel.

Disc brakes

The advantage of disc brakes is the excellent braking behavior of the bicycle and a high degree of resistance to dirt and weather conditions. The brake responds well in wet conditions, although it is sometimes noisy.

Function check

▪ When the thickness of the brake disc drops below the specified wear level, the disc must be replaced. Pay attention to the engravings or markers informing about the permissible degree of wear on the brake disc and additionally follow the safety rules and instructions contained in the instructions for individual components provided by the brake manufacturer.

▪ For performing all activities related to adjustment, care and servicing of brakes Expert knowledge and specialized tools are required. All maintenance work should be done commissioned to the TOSABIKES dealer who will carry out the inspection.

▪ If DOT brake fluid is used in the brake system, it must be changed regularly according to the manufacturer's information - specialist knowledge is required.

▪ Make sure that the brake disc will not be damaged during transport and use transport protection when removing the front wheel. Some models of disc brakes have a sight glass on the brake shoe through which the gap between the brake pad and disc is visible. The brake disc must run smoothly and evenly in the center of the brake pads. If the braking force decreases, it may be a sign of wear on the brake pads. Therefore, the wear of the brake pads should be checked regularly. For this they must be removed. Basically the brake pads should be replaced when

▪ have reached the wear limit they have set for themselves

▪ their surface will be unevenly worn

▪ they are contaminated with oil

▪ the holding / return spring rubs against the brake disc

Brake discs are also replaced when their thickness becomes less than the permissible wear value. Some of the wear levels can be checked with the markers located directly on the brake disc. It may be, for example, a color-coded recess in the disc. When the paint is completely wiped off and thus the cavity disappears from the disc, it is absolutely necessary to replace the brake disc. Signs of a high degree of wear on the brake disc may also be reduced braking performance and a pronounced noise of friction when braking.

Propulsion

General instructions

▪ Expert knowledge and specialized tools are required to perform all activities related to the adjustment, care and servicing of the drive. All maintenance work should be done
commissioned to the TOSABIKES dealer who will carry out the inspection.

▪ In this regard, always follow the safety rules and instructions in the operating instructions individual components provided by the respective manufacturer of the derailleur.

▪ Exercise and checking the operation of gear shifting should be performed in a place where it is safe to move around.

▪ Never shift gears while pedaling backwards, as the derailleur may jam. Never shift gears while stationary, otherwise you may damage components.

▪ When shifting gears, pedal evenly and with little force to prevent the chain from slipping.

▪ The drive must be very precisely aligned. If the adjustment is not made, the chain may come off and the drive will stop suddenly.

▪ When riding the bicycle, wear appropriate clothing that will not be worn while pedaling
screwed into the rotating parts of the drive.

The driveline transmits the force from turning the crank and consists of the following components: pedals, pedal crank, bottom bracket, front sprockets, chain and sprockets. The derailleur is used to adjust the pedaling resistance to the terrain and the driving speed. In a low gear with a high pedaling frequency, you can climb steep grades with moderate effort. Going downhill in high gear, you cover a long distance at high speed with one revolution of the crank. The greatest health benefits, the greatest endurance and the best performance are obtained when the pedal crank is driven at a relatively high pedaling frequency (approx. 60-90 rpm) with little effort. Use the entire gear range available to ensure you always find the right rhythm for you, under varying driving conditions. After driving in the rain, the moving parts of the derailleur should be cleaned and lubricated with a suitable lubricant. The shifting lever, from the rider's perspective, located on the right side of the handlebar, operates the shiftingrear sprocket setting the chain on the rear sprockets. The chain moves towards the small sprockets on the rear sprocket set when the front index finger is operated. Using a thumb-operated gearshift causes the reverse process to run - the chain moves from small to large rear sprockets.

Some Shimano shift lever models also feature a 2-Way-Release function. These shifting levers operate according to the shifting principle described above, however, the index finger can also be operated with the thumb. In addition, this technology allows several gears to be shifted with a single lever movement. Briefly pressing the right thumb lever shifts to the next gear. By further pushing the right thumb lever, it is possible to shift several gears (not recommended for electric assist bikes).

Chain

Chain wear and maintenance

Shifting gears under heavy load can damage or even break the chain.

▪ Do not get on the braking surfaces of the rim, brake blocks or brake discs
lubricant. In this case, the braking performance would be reduced or in the worst case complete leveling.

▪ Only a suitable and comparable chain of the same width and length may be used for replacement. The number of links in the new chain must match the number of links in the chain originally fitted.

▪ Check the chain regularly for damage such as deformation and cracks. Unintentional gear changes or the skipping of the sprocket are factors indicating a chain failure.

▪ Specialist knowledge and special tools are required for all activities related to the adjustment, care and servicing of the drive. All maintenance work should be done commissioned to the TOSABIKES dealer who will carry out the inspection.

The strength and quiet operation of the chain depend on its servicing. Sometimes service intervals depend on driving conditions. Especially in the winter months, the chain is exposed to a greater degree of wear due to the environmental conditions. First of all, in rainfall conditions, the chain should be lubricated with a suitable lubricant. Use a neutral detergent for regular cleaning of the chain. Absolutely not to be used for this alkaline or acid solvents such as rust cleaners. Oil or chain lubricant is then applied to the inner rollers of the chain. Then rotate the pedal crank to turn the chain several times. Let the bicycle sit for a few minutes to allow the lubricant to penetrate the chain. When shifting gears, pedal less forcefully and avoid gears that are too oblique to the chain. Always select a high pedaling frequency to avoid placing heavy loads on the chain. Chain

stretching as a result of wear significantly degrades gear shifting performance. Changing the chain too late will also wear the front and rear sprockets. Replacing these items would be much more costly compared to the chain. Always check the correct tension of the chain. Chain wear can be checked with a chain gauge. The chain gauge is placed with a recess on the roller, and the gauge is placed on the chain. For a new chain the tip of the measure fits exactly between the rollers. The greater the wear on the chain, the deeper the tip of the gauge goes between the rollers. When the gauge is fully inserted so that the gauge is flush with the rollers, the chain needs to be replaced to avoid wear to other components.

Wheels and tyres

General instructions

Expertise and special tools are always required to make adjustments to the wheels and tyres or to perform maintenance and care. Ask your TOSABIKES dealer to carry out all work and check your bicycle according to the instructions provided in the chapter on *"Maintenance and Care Intervals"*.

- Always adhere to the safety and other instructions in the component guides issued by the wheel and tyre manufacturer.
- The wheel is exposed to severe stress due to the weight of the rider and the bicycle, as well as uneven terrain. Spokes and nipples subside on a new bicycle, so the wheel will need servicing by your TOSABIKES dealer.
- Incorrectly mounted wheels and thru axles are a significant safety risk. Adhere to the torque details provided in the chapter on *"Recommended tightening torques"* and use a suitable torque spanner.

The hubs on wheels are connected to the rim by spokes and nipples. The tyre is usually mounted on the rim with a tube. Rim tape is applied additionally between the tyre, tube and rim in order to prevent damage.

Handling Thru Axle

Thru axles connect the wheel to the fork, i.e. the frame, of the bicycle. There are many different thru axle systems available on the market at present. Special tools are needed for some systems. To fit the wheel, place it in the intended mountings on the fork. Introduce the brake disc into the brake calliper. Then proceed with the instructions for the specific system on the following pages.

Tire, rim, inner tube

- The air pressure information on the tyre and the rim must not be exceeded. The lower maximum value in each case is the maximum permissible air pressure. If the air pressure is too high, the tyre may detach from the rim while you are riding or the tyre and rim might become damaged.
- The tyre and the rim must be compatible. The maximum possible tyre width is limited by the installation situation and rim width. When replacing the tyres or rim, use the original parts as a guide. observe all information on the tyres and rum and ask your TOSABIKES dealer. The tyre must not rub against the frame and fork (even during compression), fenders or other bicycle components.
- Certain restrictions on the use and weight of tyres and rims apply, depending on the design – refer to the chapter on *"Intended use"*.
- The maximum permissible air pressures for tube types and tubeless types may differ. Read the instructions provided by the tyre or rim manufacturer if you want to use tubeless tyres. Also consult your TOSABIKES dealer for advice.
- When using hookless rims, the tyre must be trued on the rim before it is firmly inflated as it may otherwise jump off the rim.
- The ETRTO standards limits the air pressure for hookless rims to 5 bar. This type of rim is never suitable for high pressures, and the details on the rim flanks concerning maximum air pressure must be adhered to. On no accounts should you exceed a maximum air pressure of 4 bar.

▪ Do not use tubes that do not fit through the valve hole on the rim. This can cause the valve to detach in many cases, as the metal edges on the hole may separate the valve shaft from the tube.

▪ Avoid riding over sharp objects.

Spoke tension and rim trueness

▪ Wheels that are not properly true make it difficult to know how strongly you should apply the brakes. This is because the brake pads engage with the brake surfaces on the rim with unusual strength due to the squint alignment.

▪ Loose spokes on your wheels must be re-tensioned as soon as you notice them. The stress exerted on other components rises considerably if you do not. Component breakage or failure may cause accidents or falls that lead to injuries.

Punctures

Punctures are one of the most frequent causes of breakdowns when cycling. They can be fixed if you carry the right tools, a spare tube or a repair kit.

Removing the wheel for disc brakes

On no accounts should you press the brake lever on the disk brakes after removing the wheel. After removing the wheel, attach the supplied transport lock to the brake to prevent the pistons on the brake calliper from moving too far inwards and causing problems when refitting the wheel – refer to the section on *"Disk brakes"* in the chapter on the *"Brake system"*.

Removing the wheel for deallieur gears

Move the chain to the smallest sprocket on the rear sprocket to remove the rear wheel. The rear derailleur will then be in its outermost position and will not interfere while you remove the wheel. Move the small lever on the rear derailleur to the OFF position to facilitate wheel removal. Only then open the thru axle or quick release. To release the wheel from the mountings on the frame, lift the bicycle slightly and pull the rear derailleur gently backwards by hand – refer to the section on the "Derailleur gears" in the chapter on "Propulsion".

Mountaing the wheel

▪After installing the wheel, you need to attach the Thru axle or a quick-release

▪ All braking surfaces must be free of oil or grease.

▪ Before continuing to drive, follow the instructions in the "General information" section in the "Before each trip" section.

Depending on the brake system or drive system, the assembly of the wheel takes place in the reverse order than that described in the section "Removing the wheel". The wheel must fit exactly in the intended mountings on the fork or on the frame. It is important to pay attention to the correct seating of the Thru axle or axle. quick release

Suspension elements

Expertise and special tools are always required to make adjustments to the suspension elements like the suspension fork, shock and suspension or height-adjustable seat post or to perform maintenance and care. Ask your TOSABIKES dealer to carry out all work and check your bicycle according to the instructions
provided in the chapter on *"Maintenance and Care Intervals"*.

▪ Always adhere to the safety and other instructions in the component guides issued by the individual suspension element manufacturer.

▪ Suspension elements must be adjusted to the rider's weight, sitting posture and intended use to ensure they work perfectly. Ask your TOSABIKES dealer to make all these adjustments before handing over your bicycle.

▪ On no accounts should suspension elements bottom out. Sudden and complete compression of

the total suspension travel indicates that the air pressure is too low or the spring stiffness of the suspension fork, the shock or the suspension seat post is inadequate. The impact caused by this process may be transmitted to other components and lead to dangerous situations.

▪ Many suspension forks and shocks have the option using a locking mechanism (lockout) to block the suspension travel. Only use this function on even terrain and never in offroad terrain. There is the risk that you may lose control of your bicycle.

▪ Please be aware that your suspension fork and shock may be damaged when the lockout is closed. The suspension fork or shock is not completely rigid on some models and yields a little when force is applied, even if the lockout is closed.

▪ Do not turn screws if you are unaware what they control. You might release a mounting mechanism.

▪ It will not be possible to cushion a quick succession of obstacles if shock attenuation is too high on the suspension fork or the shock. In contrast, the bike will start to jump if the shock attenuation is too weak. This may also become dangerous.

▪ On no accounts may the tyres touch the suspension fork or the frame if the suspension fork or the shock compresses completely. The tyres may block.

Spring hardness - The spring hardness is the force that must be applied to achieve a specific degree of compression. A higher factor means greater spring hardness and therefore greater force per stroke. For air cushion elements, this value is equal to the higher pressure.

Spring characteristics - This parameter describes the starting torque, the use of the suspension travel and the protection against collision with the suspension fork or rear shock absorber. The spring characteristics are most often presented in the form of a graph. Pre-deflection of the shock absorber - As a result of the pre-deflection of the steel springs, the shock absorption will only work with a higher load. However, this has no effect on the hardness of the spring. Deflection Damping - Deflection Damping reduces the rate of deflection. Return Suppression - Return suppression reduces the rebound speed. Damper Negative Deflection - Damper Negative Deflection is the stroke which the suspension fork or rear shock will bend when the rider takes his normal seated position while stationary. Remote-With this small switch lever located on the handlebars, you can lock the fork or shock absorber and thus adjust the riding behavior of the bike depending on the current terrain. Lock-out- This is how the locking of the fork / shock absorber is determined. With the Lockout locked, a minimal suspension travel is still possible to protect the fork and shock from damage.

Suspended forks

Adjusting a spring stiffnes

Almost every TOSABIKES comes equipped with a suspension fork. The mechanism significantly improves riding characteristics and control on rough terrain or uneven paths. It also reduces the strain exerted on other bicycle components and the rider. The suspension element in the fitted forks are either steel springs or air, while oil or friction are generally used for attenuation. The fork must compress slightly by the negative suspension travel as soon as the rider assumes a seated position; it does so to compensate uneven ground (e.g. potholes) by means of the fork extension. This effect will not occur if the spring preload or the air pressure is too high, as the fork will already be fully extended. The negative suspension travel is set to be shorter or longer, depending on the intended use. The suspension fork on a bicycle belonging to the cross country, trekking, city and marathon categories must compress by around 10–25% of the maximum suspension travel as soon as the rider assumes a seated position. This value should be approx. 20–40% for the gravity, freeride and downhill categories („Fig. 1/ Source Fox" on page 37). It is important to note that the riding characteristics will differ very considerably, depending on the fork settings. Read the enclosed instructions for detailed information.

1. Let the air out of the fork to determine the total suspension travel.
2. Inflate the fork to the recommended air pressure.
3. Push the O-ring all the way down. If your fork does not have an O-ring, use a tie-wrap strapped tightly around the down tube.

4. Assume your customary seated position on the bicycle and support yourself against the wall.
5. Dismount from the bicycle without allowing the suspension to extend.
6. Measure the gap between the O-ring or tie-wrap and the uppermost edge of the dip tube. Compare this value with the fork's total suspension travel.

There is often a dial at the top of the fork leg on forks with steel springs. This dial is used to alter the preload on the spring and therefore the negative suspension travel. The steel spring must be replaced if this is not possible. Air fork manufacturers specify the air pressure for each model and area of use. The instructions supplied by the suspension fork manufacturer contain further information. Regularly check the air pressure in your fork. Also refer to the chapter on "Maintenance and care intervals". The air pressure is usually checked using a special pump, which can be purchased from your dealer. Do not use a conventional air pump, e.g. for tyres, as it will be designed for larger capacities and may damage the suspension fork.

There are retrofit kits available for many suspension fork models if the adjustment options are insufficient for you. Simply contact your TOSABIKES dealer. Only use matching and labelled, original spare parts when replacing components.

Addjusting the shox attenuation

Valves on the inside of the fork regulate the shock attenuation. They control the flow of oil. The speed at which the suspension fork compresses or extends changes. It is therefore possible to optimise the fork response for various obstacles. Blocking the shock attenuation can also reduce the rocking motion while pedalling. But shock attenuation must be open to a degree at least when you are riding downhill or offroad. Shock attenuation is adjustable on many suspension forks. Extension speed is adjusted by means of the rebound. The instrument to set the speed may be located on the underside of the dip tube of on the fork crown. The corresponding adjustment knob is usually red. Adjust the rebound settings to suit your needs and your preferred area of use. If the adjusting screw is closed (clockwise rotation), the oil inside the fork flows too slowly. This increases attenuation acting on the fork. A quick succession of bumps in the terrain will not be compensated fast enough. Turning the adjusting screw to open (anti-clockwise rotation) will weaken shock attenuation and the fork will work faster on uneven ground. Setting the compression level influences the speed of compression. Compression is adjusted on the fork crown. The adjustment knob is usually blue. To change the compression, suspension forks can be fitted either with an adjustment dial or a 3-position lever.

If the compression is very tight (clockwise rotation), the fork will offer a hard response. Turning the dial anticlockwise sets the compression to a softer response.

Shocks

Besides a suspension fork, many bicycle models come with a second suspension element, namely the shocks, which keep the tail mobile. The mechanism improves control of your bicycle on rough terrain or uneven paths. Shock tend to use an air spring. Like with suspension forks, oil takes care of the shock attenuation.

Determing the negative supsension travel for shocks

1. Let the air out of the damper to determine the total suspension travel.
2. Inflate the damper to the recommended air pressure.
3. Push the O-ring – or optionally a tie-wrap wrapped firmly around the piston – all the way down.
4. Assume your customary seated position on the bicycle and support yourself against the wall.
5. Dismount from the bicycle without allowing the suspension to extend.
6. Measure the gap between the O-ring or tie-wrap and the seal on the damper. Compare this value with the damper's total suspension travel.

The shock on a bicycle belonging to the cross country, trekking, city and marathon categories must compress by around 10–25% of the maximum suspension travel as soon as the rider assumes a seated position. This value should be approx. 20–40% for the gravity, freeride and downhill categories. The smaller the negative suspension travel, the harder the shock attenuation, making it better for even terrain like roads. Shock

manufacturers specify the air pressure for each model and area of use. Adhere to their recommendations and read the component instructions provided by the individual manufacturer. Regularly check the air pressure of your shock by making sure that the O-ring is correctly positioned on the damper piston. The shock must not bottom out. This is usually indicated by a clear sound. Over time, bottoming out the shock may damage the frame or the damper. You must replace the damper if the adjustment options are insufficient for you. Retrofit kits are available for some shock models. Only use matching and labelled, original spare parts when replacing components.

Addjusting the shocks attentuation

Valves on the inside of the shock regulate the shock attenuation. They control the flow of oil. The speed at which the damper compresses or extends changes. It is therefore possible to optimise the damper response for various obstacles. Blocking the shock attenuation can also reduce the rocking motion while pedalling. But shock attenuation must be open to a degree at least when you are riding downhill or offroad. The rebound and hence the compression response of the damper can be adjusted for many shocks. The adjustment knob on the damper is used for this purpose. Adjust the rebound settings to suit your needs and your preferred area of use. If the adjusting screw is closed (clockwise rotation), the oil inside the damper flows too slowly. The shock effects greater attenuation. A quick succession of bumps in the terrain will not be compensated fast enough. Turning the adjusting screw to open (anti-clockwise rotation) will weaken shock attenuation and the fork will work faster on uneven ground. Setting the compression level influences the speed of compression. Compression is changed using the adjusting lever. To change the compression, the shock can be fitted either with an adjustment dial or a 3-position lever.

Maitenance of supsension elements

The suspension fork and the shock are complex components. A certain degree of maintenance and care is necessary to ensure they work faultlessly. The service intervals depend strongly on the manufacturer of the fork/damper. Refer to the manufacturer's instructions for more information. Some maintenance is the same for all manufacturers:

- Make sure that the sliding surfaces of the fork down tubes and the damper piston are always free of dirt. Use water and a soft sponge to clean the fork and the damper after each excursion. Then spray the down tubes and the piston with a suitable lubricant.
- Bring the bicycle to your TOSABIKES dealer for regular inspections of all screw connections on the fork and damper – refer to the chapter on *"Maintenance and care intervals"*.
- Regularly check the air pressure in the fork and shock. Air may gradually escape over time – refer to the chapter on *"Maintenance and care intervals"*.
- Regularly check the shock for horizontal bearing clearance. Grasp the saddle and lift up the bicycle, then move the rear wheel to the left and the right. Consult your TOSABIKES dealer to repair the problem if you notice any bearing clearance.
- Regularly check the shock for vertical bearing clearance. To do this, lift the rear wheel slightly and then replace it gently on the ground. Listen for any clicking sounds. Consult your TOSABIKES dealer to repair the problem if you notice any bearing clearance.

Supsension dropper seat post

For height-adjustable seat posts, the correct saddle height is only set when the seat post is fully extended. Height-adjustable seat posts are used to adapt the seat position to the use of the bicycle and to the terrain. The adjustment process is carried out using a lever on the steering wheel. The lowering mechanism may be hydraulically or mechanically activated. To leave the saddle, you need to press down on it with your hand or sit on it while pressing and holding the lever. After reaching the desired amount, it will slow down

lever. To raise the saddle, press the lever on the handlebars. After reaching the desired height, it will relieve you the saddle and slows down lever. The saddle can be raised and leaves as high as the seat post length allows. To ensure proper operation of the dropper post, the user should clean the dropper post after each ride and then lubricate it for efficient operation.

Headsets

▪ Expertise and special tools are always required for all adjustments, maintenance and care of your headset. Ask your TOSABIKES dealer to carry out all work and check your bicycle according to the instructions provided in the chapter on *"Maintenance and Care Intervals".*

▪ A loose headset increases the load on the fork and other components.

▪ Excessive tightening of the bearing may destroy the headset.

The headset is the bushing on the fork and connects it to the head tube. The headset must work smoothly, but without bearing clearance. The headset is exposed to stress when travelling on undulating paths or across uneven ground, which may cause it to loosen. It is therefore essential to check the headset bearing clearance regularly – refer to the chapter on *"Maintenance and care intervals".*

Checking the bearing clearance

Place your hand around the gap between the fork and the head tube. Use your other hand to press the front brake at the same time. Gently push the bicycle back and forward several times. You will notice clearly if there is bearing clearance in the headset.

Then lift the front wheel. Allow it to drop to the ground from a low height. You will hear an unusual sound when the front wheel hits the ground if there is bearing clearance in the headset. Also check that the headset runs smoothly when the front wheel is raised. To do this, move the handlebars back and forth in both directions. The handlebars must turn smoothly and without recoil. Make certain as well that the stem is mounted firmly. Grasp the front wheel between your legs. Try to twist the handlebars. If necessary, tighten the screws on the stem according to the instructions provided in the chapter on "*Recommended tightening torques".*

Ahead headsets

In this kind of headset, the stem is not inserted into the steer tube, but grasps the steer tube from the outside. The bearing clearance is adjusted by stem clamping. The headset bearing may be integrated in the frame. The headset will not be visible in this case. The spacing ring and the fork therefore transition directly into the head tube on the frame. Nonetheless, the settings can be checked in the same way as for a conventional Ahead headset. To determine the bearing clearance, however, it is necessary to consider the transition from frame to fork in more detail.

Particular properties of carbon material

Carbon is a carbon fibre-reinforced polymer and has special properties.

▪ A regular and thorough visual inspection of the frame and fork must be performed regularly to identify any damage (e.g. cracks, discolouration). Impact or shocks can cause damage that in most cases will not be visible on the exterior. This may include delamination (detachment of the fibres from the surrounding resin matrix) in lower laminate layers, leading to a drastic reduction in performance and therefore safety as well.

▪ For safety reasons, the frame and fork must no longer be used after an accident, fall or similarly excessive mechanical load.

▪ The instructions issued by the individual manufacturers for mounted components must be adhered to in every event. Delamination may occur on carbon components like the handlebars, stems or seat posts if the bolts are excessively tightened at the connection points. Adhere to the specified tightening torques for the components as stated in the chapter "Recommended Tightening Torques" or ask your TOSABIKES dealer.

▪ Damaged carbon components must not be repaired. The safety risk is too large. Immediately replace any damaged carbon components.

▪ On no accounts may you expose carbon materials to excessive temperatures. Never repaint or powder coat frames, forks or other mounted parts.

▪ Only use mounted parts and components that have been approved for use with carbon frames and that have the correct dimensions. Only use special tools to fit parts. Adhere strictly to the specified torques as stated in the chapter
"Recommended Tightening Torques".

▪ TOSABIKES carbon frames are not suitable for training on fixed rollers (e.g. Elite). They can run on rollers without fixed mounting. Mounting surfaces (seat tube, steer tube, etc.) must not be greased. In these cases, only apply special mounting pastes for carbon parts to the surfaces. Seat tubes and bearing seats must not be sanded, re-milled or otherwise mechanically processed.

▪ As a precautionary measure, it may be necessary to replace load-bearing components such as the handlebars, stems or seat posts in regular intervals (every 2 years). Your TOSABIKES dealer will gladly offer advice.

▪ Never use transport systems and mounting stands with clamp mechanisms. The atypical load exerted by the clamping mechanism may damage or destroy the frame.

▪ Protect areas of the carbon frame that are particularly susceptible to damage, especially the underside of the down tube and the areas where the gear or brake cables rub. Your TOSABIKES dealer can obtain special stickers to protect the frame. There are also special stickers for the chain stay to prevent the chain from being damaged on the frame/paint.

▪ Never store carbon parts close to heat sources. Also do not leave carbon parts for extended periods in your car on particularly sunny days. High temperatures can damage the material.

▪ Always ensure that carbon bicycles or components are properly protected during transport by car. Use foam, blankets or similar items to pad the materials.

▪ Never use trailers, racks or child seats in connection with a carbon frame.

▪ The seat posts must be dismantled regularly and then refitted with mounting paste.

▪ Under no circumstances should carbon frames be engraved, as doing so may negatively affect frame stability and can cause the frame to break – refer to chapter *"Warranty and Guarantee"*.

Bicycle transport by car

▪ The roof and rear racks must comply with the applicable safety standards in your country.

▪ Remove all additional attachments such as panniers or child seats when transporting your bicycle on a roof or rear rack.

▪ Bicycles made of carbon are for suitable for transport on roof or rear racks on cars. The clamping mechanism may damage the frame material.

▪ Bicycles without round tubes at the mounting position are not suitable for transport on a roof or rear rack. The necessary clamping force cannot be applied.

▪ E-bikes may be subject to different requirements due to the valid national regulations on hazardous goods. Adhere to the instructions in the document EPAC – Supplement to the Original Operating Instructions.
Transporting your bicycle in the boot of your car protects it from external influences. A variety of alternative transport solutions are available if your boot is not suitable to fit a bicycle. Always consider the increased aggregate height of your vehicle due to the bicycle on the roof rack. Measure the aggregate height of your vehicle and write it down so that you do not cause accidents or obstruct traffic at underpasses and such like.
When using a roof rack, the tyres of the bicycle are placed in a track and a holding device is clamped to the down tube of the frame. The frame tube must not be compressed during the clamping process.

▪ Pay attention to the permissible payload of the rear rack and adhere to any mandatory speed limit as applicable.

▪ Make sure that the license plate and lighting on your car are not concealed. National laws may require you to fit an additional wing mirror/license plate holder. Rear racks are attached to the trailer hitch on the car. When using a rear rack, the tyres of the bicycle are placed in a track and a holding device is clamped to the top/down tube of the frame.

Maintance and care

Never use a high-pressure washer or steam cleaner to clean the entire power bicycle.
The strong jet of water could damage the electric components of the drive and the sensitive bearings of other components. To clean the power bicycle, use a soft sponge or soft brush. As a rule, use a small amount of water and keep away from the electrical connections. After cleaning, check the plug connectors for moisture, they should dry before the next bike start. Careful cleaning of an electrically assisted bicycle will help to extend the life of the individual components. The e-bike should be cleaned regularly as per the above steps described way.

▪ Never use steam cleaners or high-pressure cleaners for cleaning. This could damage the bearings and seals on the bicycle.

▪ When cleaning, pay attention to deformation, cracks or discoloration on the surface bicycle. Have any damaged parts replaced immediately by your TOSABIKES dealer.

▪ Matt varnishes must never be varnished.

▪ No grease or care agent may get onto the dyno surfaces. If it does, it will this adversely affects the effectiveness of the brakes.

▪ Under no circumstances should any oil or grease be applied to the carbon clamps.

▪ Always use chemically neutral detergents to clean painted surfaces cleanliness. Cleaning agents based on acids or alkalis can be aggressive to the surface.

▪ Avoid contact of the cleaning agent with the handlebar grips or other silicone / rubber components of the bicycle. When cleaning the bicycle, check the chain for wear as described in the "Drive" section in the "Chain" section. After cleaning the chain, lubricate it with a suitable lubricant.

Storage and safekeeping

▪ Never suspend your bicycle from the rims if they are made of carbon. The rims may break.

▪ Many dealers offer promotional prices for annual inspections during the winter months. You will barely have to wait at that time of the year, either. Use this period to bring your bicycle for its annual inspection.
If a bicycle is regularly maintained, no special measures are required if it is parked for a short period. You should certainly fit a suitable mechanism to protect against theft. Keep your bicycle in a dry and well-ventilated place. Adhere to the following if you intend to mothball your bicycle for a longer period:

▪ The tubes in the tyres will gradually deflate. This may damage the tyre structure.

▪ Hang the wheels of the complete bicycle in a raised position above the ground. Check the tyre pressure regularly if this is not possible.

▪ Clean your bicycle before you mothball it for an extended period. This will protect it from corrosion. Ask your TOSABIKES dealer about suitable care and cleaning agents.

▪ Dismantle the seat posts. Any moisture that penetrates your bicycle can then evaporate.

▪ Shift to the smallest chainring at the front and to the smallest sprocket at the back. This relaxes the tension on all cables and springs.

Maintenance and care intervals

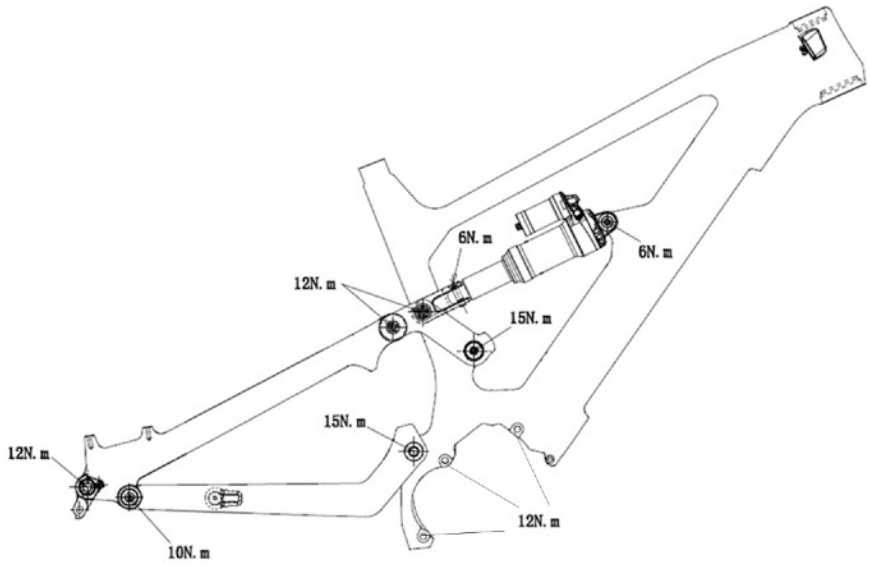
After driving the first 100 kilometers, make an appointment with your TOSABIKES dealer for a warranty inspection of your bicycle. The following table lists the subsequent service intervals for the individual components as follows after the first inspection. In the event of an intensive load on the bicycle, e.g. regular use in unfavorable weather conditions, the frequency of inspections must be increased to a certain extent. It should be borne in mind that aggressive environmental factors have a negative effect on all surfaces of the bicycle. Even the most careful production process cannot prevent it. In such cases, weekly cleaning is necessary. If the required action is marked in the End customer box, you can do it on your own. If you feel uncomfortable with servicing or repairs, please contact your TOSABIKES dealer. If the required action is marked in the Seller field, it can only be carried out by the TOSABIKES seller.

Maintenance and care intervals			Performed by	
COMPONENT	Activity	Maintenance interval	Customer	Dealer
Tyres	Check air pressure	Before every ride	x	
	Sprawdzenie głębokości bieżnika	Before every ride	x	
	Check side walls (cracks)	Monthly	x	
Brakes	Check lever travel / Stationary brake test	Before every ride	x	
	Check pad thickness	Before every ride	x	
	Clean	Monthly		x
Fork	Check screw connections	annually		x
	Oil change	annually		x
Chain	Lubricate	Before every ride	x	
	Replace	After 1000km		x
Front Sprocket	Check and replace	Beetwen1500km a 3000km		x
Crank	Tighten screws	Monthly	x	
Paint and carbon	Treat surface	6-monthly	x	
Wheels	Check trueness	Monthly	x	
Handlebar	Treat surface	Before every ride	x	
	Check and replace	After 2 years at the latest		x
Seatpost	Check screws	Monthly	x	
	Grease	annually		x
Rear derailleur	Clean and lubricate	annually		x
Screws and nuts	Check and tighten	Monthly	x	
Spokes	Visual inspection	Before every ride	x	
	Centering	annually		x
Thru Axle	Check tight fit	Before every ride	x	
Headset	Check bearing clearance	Before every ride	x	
	Clean and Grease	annually		x
Valves	Check tight fit	Before every ride	x	

Stem	Check and replace	After 2 years at the latest		x
Cassete	Check and replace	Beetwen1500km a 3000km		x
Cables (shifting system/ Brakes, dropper	Check and replace	annually		x
Motor	Check and Grease	Beetwen 2000km and 2500 km		x
Frame	Checking screw connections	After first 100km and later annually		x

Recommended tightening forces

You absolutely must not exceed the torque specified by the manufacturer of the component in question, otherwise there is a risk of the component breaking. The relevant information is given in the tables below. You should pay attention to the data placed directly on a given component, if they are there. Correct tightening of the screw connections of individual components ensures the operational safety of your TOSABIKES bicycle. They should be checked regularly. When carrying out any work, use a torque wrench,
which makes it possible to recognize when the correct tightening torque has been reached. The torque should be increased gradually in small steps, preferably in half Newton meters increments. In the meantime, check the stability of the screwed element from time to time. For components for which an exact torque is not specified, start with a torque of 2 Nm. You should pay attention to the data placed directly on the given component and follow the instructions provided with the components from individual manufacturers.



Element	screw connection	Torque
Water bottle cage bolts	Frame	4Nm
Pedals	Mounted on the crank arm	30Nm
Seatpost clamp	Saddle tube clamp	5Nm
Stem	Fastening the stem	5,5Nm
Stem	Fixing the handlebar	5Nm
Saddle	Fastening the saddle	8Nm
Brakes	6-bolt disc mounting	4Nm
Rear derailleur	Attaching the derailleur hanger	8-10N m
Cassete	Cassette nut	40Nm

Front sprocket	Sprocket nut / lock	35Nm
Cranks	Left crank arm	19Nm
Cranks	Right crank arm	19Nm
Cranks	A nut that blocks the crank arm	3,5Nm

Electric assist bicycle drive system

All TOSABIKES bikes with an electric drivetrain are known as EPAC (Electrically Power Assisted Cycles) in accordance with the EN 15194 standard. They differ from a non-motorized bicycle in essence with the on-board computer, battery and drive unit installed. All components operating in conjunction with the driveline are described in detail on the following pages. In the following description text, the drive unit is also referred to as drive unit, battery as power pack or powertube, display as on-board computer and charger as charger. In this supplementary manual, electric assist bicycles are also referred to as electric bicycles. Only original drive components and original batteries of the selected manufacturer are installed in TOSABIKES electric assisted bikes. Therefore, when retrofitting or replacing parts of your bicycle, use only original parts from the respective manufacturer. The use of unsuitable or third-party drive components and batteries can cause the battery to overheat, ignite or even explode. In this case, all warranty and warranty claims for the drive system are also void. The e-bike drivetrain components in models from different years are only partially compatible with each other. Never try to forcefully use incompatible drive components. In this way, you are endangering yourself and others. In this case, all claims under the guarantee and warranty for the drive system expire. Electrically assisted bikes with a battery fully integrated in the down tube of the frame must absolutely not be used without the battery cover.

Drivetrian

Safety Tips

Read all safety instructions and recommendations. Failure to follow the safety instructions and recommendations may result in electric shock, fire and / or serious injury. All all safety tips the work and recommendations should be kept for further use. The term battery used in these operating instructions refers to all original TOSABIKES eBike batteries.

-It is forbidden to take any actions aimed at modification, in particular elevation
propulsion power or the maximum assisted speed that the propulsion can achieve. This poses a threat to your own safety and the safety of others, and may also result in the user moving on public roads in an illegal manner.

-Do not make any modifications to the eBike system and do not install any additional products that could enhance the performance of the eBike system. As a rule, this reduces the service life of the system, and there is also the risk of damaging the drive unit and the bicycle. In addition, there is a risk of losing the warranty. Failure to comply with the recommendations also poses a threat to your own safety and that of other road users. An accident caused by changes made to the system entails high liability costs and even criminal proceedings.

-Do not open the drive unit. The drive unit is maintenance-free and may only be repaired by qualified personnel using original spare parts. This ensures safe operation of the drive unit. Unjustified opening of the drive unit invalidates any warranty claims.

-All parts mounted on the drive unit and all other parts of the electric bike drive (e.g. chain wheel, driver, pedals) may only be replaced with parts of identical construction or with parts specifically provided by the manufacturer of the electric bike. This avoids overloading and damaging the unit driving force.

-Before starting work on the electric bike (e.g. inspection, repair, assembly, maintenance, chain work, etc.), transporting the bicycle by car or plane, or storage battery, remove the battery from the bicycle. Inadvertent starting of the eBike may result in personal injury. Under extreme conditions, such as sustained high loads

and low speed during mountain travel or under load, the temperature of individual parts of the drive can reach> 60 ° C.
-After riding, avoid contact with the drive unit housing with your bare hands or feet. In
under extreme conditions, such as sustained high torque at low speeds, or when riding uphill or under load, the housing may become very hot. High temperature of the drive unit casing can be caused by the following factors:
- Ambient temperature
- Driving profile (route length / hill)
- Duration of the ride
- Assist modes
- User behavior (own contribution)
- Total weight (cyclist, eBike, luggage)
- Engine cover of the drive unit
- Heat dissipation properties through the bicycle frame
- Type of drive unit and transmission
-Only use original TOSABIKES batteries that the manufacturer has provided for a given type of bicycle. Using any other type of battery may cause injury or fire. If the wrong batteries are used, TOSABIKES is not liable, including under the warranty.
Do not place the magnet near implants or other medical devices, such as a pacemaker or insulin pump. The magnet creates a field that can disrupt the operation of implants and medical devices.
-The magnet should be kept away from magnetic data carriers and magnetically sensitive devices. Under the influence of magnets, irreversible data loss can occur.
- Comply with all national laws relating to the approval and use of electric bicycles.
-Read and follow the safety instructions and recommendations in all eBike system manuals and in the eBike owner's manual.

Cooperation of the eBike system with gears

Also, when using the eBike drive, use the gears as you would on a normal bicycle
Regardless of the type of derailleur, it is recommended that you stop pedaling for a while while shifting gears. This will facilitate gear shifting and reduce wear on the driveline. By selecting the correct derailleur, you can increase your pace and distance with the same amount of effort.
First experiences It is recommended that you take your first e-bike experience away from busy streets. Try different levels of support. Start with the lowest level of assistance. Once you have gained enough experience, you can put yourself in traffic with an e-bike - just like any other bike. E-bike distances should be tested under a variety of conditions before moving on to longer, more challenging routes.

Safety rules

▪ When using the TOSABIKES electric bicycle, additional risks may arise due to the use of electronic components in it. With this in mind, please read all of the safety precautions and keep them for future reference. Failure to comply with the safety rules may result in electric shock, burns and / or serious injury.

▪ It is not allowed to make any modifications or changes to the design, both in terms of hardware and software. This can lead to unpredictable hazards, accidents or falls resulting in personal injury.

▪ The battery should always be charged in a dry environment and never near flammable or combustible materials. In addition, metal / electrically conductive objects should be kept away from the battery, as they may short-circuit if they come into contact with the battery terminals, seriously increasing the risk of fire.

▪ Use caution in the case of implanted pacemakers and medical devices. This electric assist bike has been tested in accordance with all applicable standards and
required for this type of bike. However, it is not a special device made in accordance with medical requirements. To avoid possible interference with your own implanted pacemaker or medical device, consult your attending physician or the manufacturer of the medical device before using your electric bicycle.

▪ Sound pressure level emitted The sound pressure level based on the frequency correction characteristic A at the wearer's ears is less than 70 dB (A).

▪ Tuning Tuning is understood to mean increasing the power or speed limit for pedaling assistance in a given drive system by modifying parameters or installing so-called upgrade kits. Due to the strict legal regulations in this area, such changes are neither allowed nor recommended. The existing relevant legal provisions have been designed to avoid dangerous situations. Making such changes also contributes to a significant increase in the wear of the driveline and its components.

▪ Do not attempt to manipulate the top speed with the assist or ride behavior of the bicycle by changing parameters.

Manipulation is an offense and can lead to a fine, void your insurance policy, or contribute to an accident or fall that results in bodily injury. In such a situation, all claims under the guarantee and warranty expire.

In the following situations, special care should be taken due to the high torque of the drive system:

▪ When starting, especially at high levels of assistance, the engine power may burst. Avoid putting any weight on the pedals, unless you are sitting securely on the bicycle, or if you only push off with one foot when starting.

▪ For your own safety, use the brakes when getting on a power-assisted bicycle to prevent the bicycle from accidentally rolling away.

▪ When you bring the power bicycle to a stop, for safety, apply the brakes to prevent the bicycle from accidentally rolling away.

Service and repairing

Entrust repairs and servicing of the driveline to your TOSABIKES dealer. Improper repair and service may damage the electric bike.

▪ Be sure to remove the battery before carrying out any repair or service work.

Otherwise, there is a serious risk of injury as the drive train may start by mechanical action, such as loading the chain or pedals, accidentally pressing the Walk Assist system, etc.

▪ When repairing or servicing the electric assist bicycle, take care that the cables are not kinked, pinched, or damaged at sharp edges.

Damage to cables creates a risk of death from electric shock.

▪ Only genuine TOSABIKES components as well as genuine driveline components and batteries should be used for repair and replacement of parts. When replacing parts on an electric assisted bicycle, use only genuine TOSABIKES components as well as genuine drive components and batteries from the drivetrain manufacturer, as these must have specific properties. The use of unsuitable components or those from third party manufacturers may lead to fractures and, as a consequence, accidents or falls resulting in bodily injury. The use of unsuitable or third-party drive components and batteries can cause the battery to overheat, ignite or even explode. In such a situation, all claims under the guarantee and warranty also expire. Please contact your TOSABIKES dealer for the selection of spare parts.

▪ Have the electric bicycle serviced for the first time after driving 100 km. During the first kilometers of driving, the screw connections can still stick. After driving the first 100 km, have your TOSABIKES dealer check the tension of the spokes and the tightness of all screw connections.

Be aware that the components of an electric assist bicycle wear out more quickly. All original spare parts are available from your TOSABIKES dealer. Due to the additional force of the drive components and the increased weight of an electric bicycle, all components, especially the chain, rear sprockets and brake components, are subject to faster wear. Therefore, compared to conventional bicycles, shorter service intervals must be observed. Poorly maintained or worn components can lead to accidents or falls resulting in personal injury.

▪ Please note that due to their design, the drive components exhibit a slightly increased resistance to pedaling and make a low noise when driving.
Increased idling resistance and a soft running noise are not a direct indication of a technical fault, but are due to the design of the drive components. If there is an increase in resistance or an intensification of the noise made while driving, this may be a sign of a lack of service. Please contact your TOSABIKES dealer.

▪ Please make a note of the key number.

The key number can be written down on the last pages of the original operating manual, in the bicycle's service booklet and in the handover protocol. If the key is lost, a spare key can be ordered through your TOSABIKES dealer after giving the key number.

Range

The expected range is calculated based on the real maximum range of the electric bike determined by TOSABIKES (taking into account the most optimal driving conditions) and depending on the battery charge level, taking into account the current energy consumption. This calculation makes it possible to indicate a theoretical value. This value varies to a greater or lesser extent depending on the driving conditions. For example, when riding on hilly / mountainous terrain, the range of the electric bike drops significantly. It should therefore be taken into account that this indication can only serve as an approximate guide value for determining the remaining coverage. The expected maximum range depends on many conditions. The level of assistance selected, weight while driving, terrain, wind force and direction, tire pressure and ambient temperature are some of these factors. All the ranges given refer to the most optimal conditions. The optimal / ideal conditions are: even / flat ground with no head wind, ambient temperature 20 ° C, very narrow tires without tread, bicycle weight with a load of less than 70 kg. Factors influencing the range:

1. Topography of the route: When driving on hilly terrain, energy consumption is incomparably greater than when driving on smooth roads.
2. Selected level of support: The level of support should always be selected carefully and according to the requirements.
3. Battery charge status: Only a fully charged battery can provide the greatest possible range. Therefore, before each use, make sure that the battery is freshly charged.
4. Weight and payload: The greater the weight of the bicycle (rider and luggage), the shorter the range.
5. Tire pressure: Tires have great potential. Too low air pressure increases rolling resistance and therefore an enormously high energy expenditure. Information on the maximum permissible air pressure is printed directly on the sidewalls of the tires. Thick, deep tread tires require a lot of energy. Their replacement with smooth and narrow tires has a very positive effect on the range.
6. Moving off / accelerating from a standstill: When starting, the drive systems need significantly more energy than during continuous driving. The range can be improved by keeping the speed constant or by gently changing it. Avoid sudden pressure on the pedals.
7. External factors / weather conditions: Counterwind generates extremely high energy expenditure. Also, cold or hot conditions will quickly reduce the battery power.
8. Extra Force Action: The range will be very short if the user relies solely on the power of the driveline.
9. Gear shifting: The derailleur should be used actively as you would on a normal bicycle. For example, when driving in the mountains, shift to a lighter gear in good time. The motor can only work efficiently and effectively at the optimal pedaling frequency, which is 75 revolutions per minute. Pedaling slowly causes the assistance to jump-start, engine overheating, and battery wear is unusually high.
10. Charging external devices: Charging external devices such as smartphones or MP3 players via the charging socket next to the display can shorten the range of the electric bike accordingly

Battery

Battery charging and maintenance:
—Charge the battery in a dry place to prevent short circuit damage
—Recharge the battery at least once every 3 months, even when the bicycle is not in use, to at least 60% capacity. Do not cover the battery or charger with other items
—Do not leave the battery always plugged in. Use the charger only to charge the battery
—Do not use batteries for other devices. It is made exactly for this TosaBikes model. Do not disassemble or modify the battery case
—Do not throw into fire or use in extreme temperatures. The battery charging time from zero to 100% is 2-8 hours
—If the battery does not charge in 8 hours, disconnect it from the charger and stop charging. The battery may overheat, burst or catch fire
—If battery fluid gets into your eyes or skin, immediately wash them with clean water and consult a doctor. Failure to do so may result in serious injury
—Do not use the battery if it is visibly damaged, as it may be more seriously damaged. Do not try to modify or otherwise tamper with the battery
—Do not use soldering to connect batteries or cables directly as the battery may burst or catch fire
- Do not use the battery near a fire or direct heat source, do not throw the battery into fire, as this may cause it to burst or catch fire
—Do not subject batteries to excessive shock or vibration
—Do not insert metal objects into the charging port as this may cause the battery to short circuit, overheat, crack or ignite
—Keep the charger out of the reach of children and pets
—Do not open the battery. There is a risk of a short circuit. Opening the battery will void all warranty claims. Protect the battery from high temperatures(e.g. against constant sunlight), fire and immersion in water. The battery must not be stored nor use it near hot or flammable objects. There is a danger of an explosion.
—Keep the battery pack, when not in use, away from paper clips, coins, keys, nails, screws, or other small items metal objects that could bridge the contacts. Short circuit of the battery contacts can cause burns or start a fire. In the event of damage resulting from this type short-circuit, all TOSABIKES warranty claims will expire.
—Avoid subjecting the product to high mechanical loads and strong heat emission. They can
they damage the battery cells and lead to the leakage of flammable substances.
—The charger and battery must not be placed near flammable materials. Batteries may only be charged when dry and in fireproof rooms. Due to the increase in temperature during charging, there is a risk of fire.
—The electric bike battery should only be charged under supervision.
—The battery may become harmful if damaged and misused fumes. Provide for the supply of fresh air, and in case of symptoms, consult a doctor. The vapors may irritate the respiratory tract.
—Keep the battery pack out of the reach of children.
—Read and follow the safety instructions and recommendations contained therein in all eBike system manuals and in the electric bike owner's manual.

Charging

The battery is one of the most expensive parts of an e-bike, so special attention is paid to handling, charging and storing. The battery is sensitive to precise charging, so it is only necessary to use the charger provided by TosaBikes. The charger stops charging by itself when all the cells have reached their full capacity.

!Place the battery in the bike, and then connect the charging cable to the charging port. **REMEMBER** to first insert the charger into a 230V socket, and then into a battery charging socket or a socket on the bike**!**

We recommend that you always fully charge the battery after each ride to make sure you always have full battery capacity for your next trip. Charging the battery may take 2 to 8 hours, depending on the condition of the battery cells.
Always use in a covered, dry place (moisture and running water may damage the charger) at a temperature of 5 to 40 ° C. The charging process is signaled on the charger by a red LED. When the battery is charged and the charging process is complete, it lights up green.
Normal Battery Behavior:
If the engine stops smoothly and starts to run "abruptly", the battery capacity may be too low. In this case, switch off the electric drive and continue riding without the help of the engine, as on a normal bicycle.
It is normal for the battery to get warm and not a malfunction. The battery is protected by a temperature sensor and shuts off automatically in the event of excessive overheating. Allow the battery to cool to normal operating temperature and continue driving.
If you feel that the total capacity of the battery has decreased, it may be due to charging or operating in non-ideal climatic conditions. Perform 3 full charges. Fully discharge the battery while driving, then charge it to full capacity at room temperature. If the battery status indicator shows the battery is low, there is still minimum voltage to protect it from damage, but not enough to power the ebike. Charge the battery as soon as possible. Never leave the battery completely discharged as this may damage it.
Maintenance and cleaning
—Do not immerse the battery in water or clean it with a stream of water.
Keep the battery clean. Dirt should be gently removed with a damp, soft cloth. Occasionally clean the plugs and lubricate them lightly. If the battery is faulty, please

Proper use and care of the battery extends the life of the battery.

Charger

Read all safety instructions and recommendations. Failure to comply safety notices and recommendations may result in electric shock, fire and / or serious injury. All all safety tips the work and recommendations should be kept for further use. The term battery, used in these operating instructions, is used to describe all original TOSABIKES batteries eBike. Protect the charger from rain and moisture. There is a risk of water entering the charger risk of electric shock.
—Only recharge lithium-ion batteries that have been approved by Bosch for e-bikes. The battery voltage must be adapted to the charging voltage of the charger. Otherwise there is a risk of fire or explosion.
—Keep the charger clean. Dirt can cause electric shock.
—Check charger, cord and plug before each use. The charger must not be used in the event of damage. The charger must not be opened. Damaged chargers, cords, and plugs increase the risk of electric shock.
—Do not use the charger when it is placed on a flammable surface (e.g. paper, textiles, etc.) or in the vicinity of flammable substances. There is a risk of fire due to the rise in temperature of the charger during the charging process.
—Be careful when you touch the charger during the charging process. Wear protective gloves. The charger may become very hot, especially in high ambient temperatures.
—The battery may become harmful if damaged and misused
fumes. Provide for the supply of fresh air, and in case of complaints, contact
see your doctor. The vapors may irritate the respiratory system.
—The electric bike battery should only be charged under supervision.
—Children should be supervised during use, cleaning or maintenance. This is the only way to ensure that they do not play with the charger.
—Children and people with reduced physical, sensory or mental functions, as well as people who do not have experience and / or adequate knowledge to operate the charger in compliance with all safety rules, must not operate the charger without supervision or instruction by a person responsible for their safety. Otherwise, there is a risk of improper operation and risk of injury.

—Read and follow the safety instructions and recommendations in all eBike system manuals and eBike owner's manual.

LCD Display

Name:
—DP C240.CAN / 241.CAN intelligent display
Supplier:
—Bafang
LCD Material and Description:
—The product casing is made of ABS, the transparent part of the display is made of high-strength acrylic with the stiffness of tempered glass
—Useable down to -20 ° C
—CE / IP65 / ROHS waterproof certification
The display can also be connected to the dedicated Bafang Go application

LCD Display Description:
—Easy three-button operation
—Intelligent Battery Indicator
—Lighting control and signaling
—3 types of power level control
-0/1/2/3; 0/1/2/3/4/5; 0/1/2/3/4/5/6/7/8/9
—Distance traveled display - trip, total distance traveled (ODO), approximate range
—Error message indicator
—USB port <5V, <1A
Maximum range:
—Maximum range is calculated with a fully charged battery, on level ground and in light wind conditions. Average range is calculated with perfect mode change and slightly hilly terrain.
Display assembly and disassembly:
Note the tightening torque of the screws. Before installing or removing the display or controller, remove the handle or brake and shift lever and remove the display from the steering wheel. Damage caused by excessive tightening torque or incorrect assembly / disassembly is not covered by the warranty.

Operation and control

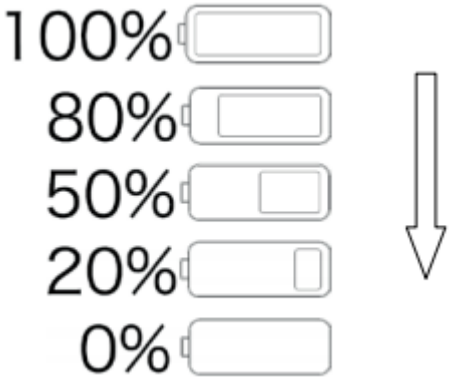
Turning on the Electric Bike's Electric System:
—Check the electrical wiring before turning on the system
—Turn on the battery by pressing the battery power button (in newer TOSA versions the button is disabled)
—Turn on the electric bike power on the control handle (mounted on the handlebar) by pressing and briefly (1.5 seconds) the ON / OFF button. The display will turn off automatically. If it will not be used (stationary) for a certain period of time (standstill time and automatic shutdown can be set) ATTENTION! Only activate the system when the bicycle is stationary, not while driving.
—After you finish riding, always turn off the electric bike in the same way.
—Regardless of the drive used (rear derailleur), it is recommended that you stop pedaling briefly when shifting gears. This makes gear shifting easier and reduces wear on the driveline. Shifting gears under load will cause rapid wear and serious damage to the bike's drive components (cassette, chain, derailleur)
- Before driving, the battery in the frame should be locked (audible, characteristic click) and the keys should be removed from the lock

Assist Mode Settings:
Press Up / Down button to change assistance level. For example, 0 is without assistance, 5 is the highest level of assistance.

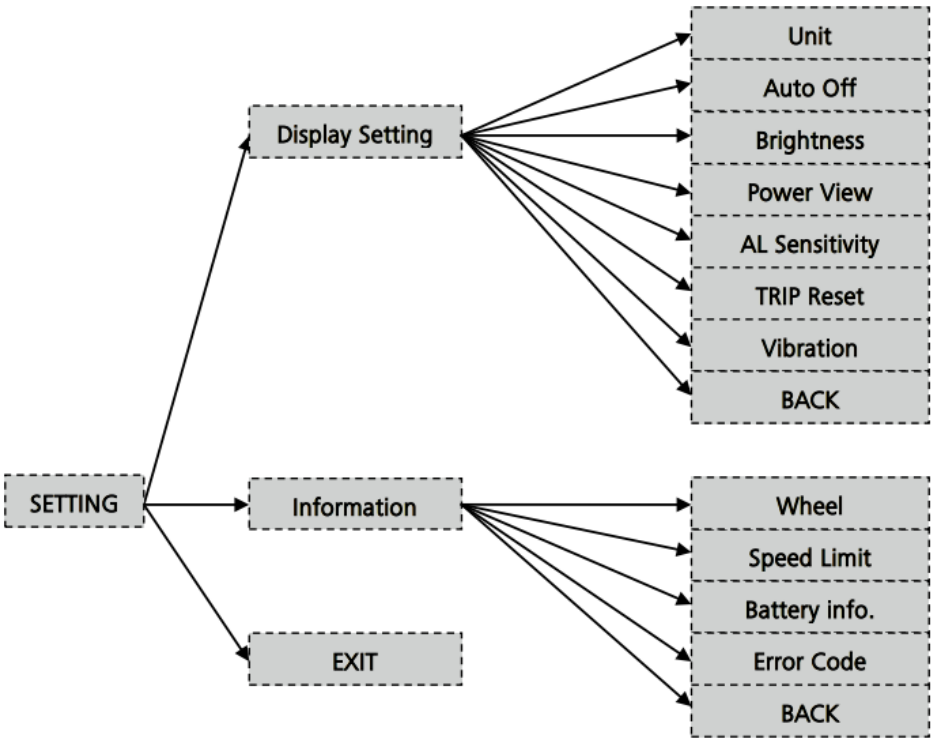
Ascent Assistant (Walk Mode):
This feature helps with walking and pushing the eBike. Press and hold the Down button for 2 seconds to enter walking mode, release the button to turn it off.

Speed and Mileage Indicator:
Press the Boost button to switch between the various parameters: trip (trip, km) → total distance traveled (ODO, km) → maximum speed (MAX, km / h) → average speed (AVG, km / h) → approximate range (RANGE, km) → energy consumed (CALORIES / KAL, KCal) → travel time (TIME, min) → current power (POWER, w).

Battery status indicator:
It shows the approximate remaining capacity of the battery depending on the external conditions and the current driving style.

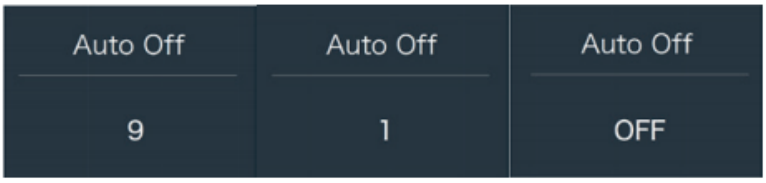


Setting the MENU parameters:
Press and hold the up and down buttons simultaneously to enter display settings.
Briefly press the up and down buttons to navigate through the menu and press the on / off button to confirm the selected option.
Follow the same procedure to exit the Display Settings screen.



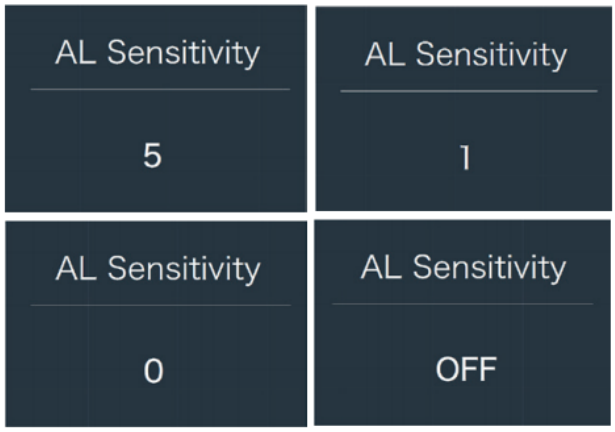
Unit selection:
Press the up and down buttons to select km / mile and press the on / off button to confirm.

Automatic shutdown time:
Use the up and down buttons to select OFF / 9/8/7/6/5/4/3/2/1 and confirm by pressing the On / Off button.

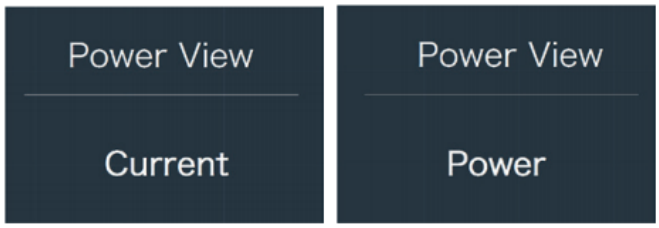


Brightness setting:
Use the up and down buttons to select 100% / 75% / 50% / 30% 10% and confirm by pressing the on / off button.

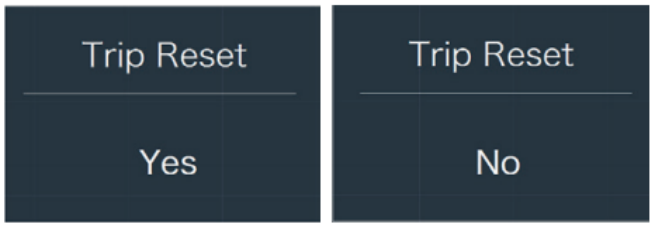
Sensitivity to light:
Use the up and down buttons to select 0/1/2/3/4/5 and press the on / off button to confirm. 0 means the feature is disabled.



Type of displayed information "Power View"
Press the Up and Down buttons to select Current or Power and press the On button. On / off to confirm.

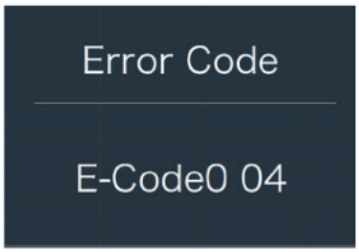


Clear distance traveled / Reset trip
Press the Up and Down buttons to select Yes / No and confirm by pressing the On button. On / off Yes to clear the value, No to exit.



Vibrations
Press the Up and Down buttons to select On. Or off And confirm by pressing the On button. On / off On the shifter. Turn on to enable the vibration function.

Error messages
The error message is labeled E-Code0 through E-code9



Any changes to the software will void the warranty. They are performed on your own risk and responsibility!

Possible problems and their solution

Most of the faults are quickly and easily repaired, even by the bicycle user. The list below will allow you to check a few things before contacting us.
-Reboot the entire system. Turn off the main power button located on the bike frame, next to the battery lock. Wait a few seconds, then turn the main power button back on. Switch the bike on again. (in newer TOSA versions the button is disabled)
-Check the connection between the main wire and the LCD display. Two wires are connected to the LCD display. Make sure these wires are connected really tightly and snugly to the display. You can pull out the plugs and put them back in the LCD display. They should sit very tightly and tightly in the display sockets.
-Check the connection of the speed sensor located on the back of the bike. An important aspect is that the magnet on the spokes of the rear wheel should be at a distance of ~ 10mm. The magnet must not be too close to or too far from the speed sensor.
-If the previous steps did not help, you can try the action below. Remove the two lower and two side Allen screws that secure the hood under the outboard. On the left side of the motor you'll find a plastic motor cover with three T10 torx screws (star), remove this cover to expose the motor wires. No need to remove the engine! On the left is the multi-pin connector of the main motor wire, the middle (purple) is unused, on the right is the speed sensor wire.
-Check these two wires, possibly one is half disconnected and not working properly. Disconnect and then press them firmly, just like the display connectors in pt. 2.
If the above steps did not help and your bike still has problems, please contact the TosaBikes team.

Error codes

If the eBike is damaged, the device can send warning messages, the icon will appear on the LCD display and the error code will appear on the speed display, the meaning of which is given in the table below.

CODE	Error description	Solution
04	The Throttle does not come back	Check that the throttle returns to its original position
05	Throttle error	Check throttle
06	Low voltage protection	Check the battery voltage
07	High voltage protection	Check the battery voltage
08	Engine hall sensor error	Visit the reseller or specialist to correct the error.
09	Motor error	Visit the reseller or specialist to correct the error.
11	Temperature sensor failure	Visit the reseller or specialist to correct the error.
12	Voltage sensor error	Visit the reseller or specialist to correct the error.
13	Battery temperature error	Check the battery temperature / stop the bike and take a break.
21	Speed sensor error	Check the position of the speed sensor
22	BMS communication error	Visit the reseller or specialist to correct the error.
23	Motor error	Visit the reseller or specialist to correct the error.
30	Communication error	Visit the reseller or specialist to correct the error.

Guarantee

Complaint procedure:
Always file a claim regarding the electric kit or battery with the dealer. When submitting a claim, submit the proof of purchase, warranty card with the registered serial number of the battery / frame, and provide the reason for the claim and a description of the defect. You can find the complaint form on our website.
The warranty covers those parts that are not sensitive to improper handling (packaging, electronics, charger, etc.), these parts are covered by a 24-month warranty. The warranty does not cover the chemical parts of the battery and the reduction in capacity caused by normal use, these parts are covered by a 12-month warranty.
24 months for battery life - does not include the chemical parts of the battery and the reduction in capacity caused by normal use
24 months for electric bike components - applies to manufacturing and material defects other than normal wear and tear caused by use.
The electric kit may only be used for the purpose for which it is intended. The electric kit must be used, stored and maintained in accordance with this instruction manual.
The warranty does not cover: If it is found that the damage to the product was caused by the user (the effects of improper installation of additional elements - not made by the Seller, accident, unprofessional

service beyond the scope of this manual, unprofessional interference in the construction of the electric bike or connection of the electrical system, improper storage, change of parts and components to other than in the original, initial specification, etc.) The warranty does not cover damage that is not a consequence of manufacturing or material defects, in particular: components subject to natural wear during operation - worn tires and chain, worn brake pads, lubricants and oils, broken shifting and brake cables, worn seals, damage resulting from non-compliance with the operating instructions, incl. shifting gears under load and the effects of random events, using the bicycle in a manner inconsistent with the user manual, resulting from improper storage and negligence in the maintenance of the product. Loss of warranty also in the case of using a broken or damaged bike, which may lead to its further damage, as well as injury to the user.

This warranty does not cover damage to the bicycle caused by practicing competitive sports and the consequences of practicing such sports in the form of accidents and injuries; This warranty does not cover consequences caused by indirect or secondary effects of a damaged frame.

Warranty repairs do not include any activities related to adjustment, in particular: centering the wheels, removing any slack in screw connections, adjusting shifting and brake cables, and replacing elements subject to natural wear during operation.

We would like to remind you that the condition for the duration of the warranty and maintaining the bicycle's efficiency is the performance of a warranty inspection (see Warranty inspection and activities before the first ride) and then performance of a regulatory service after one year of use. As part of the inspection after one year of use, the activities should be identical to those for the warranty inspection (see Warranty inspection and activities before the first ride) and additionally check the degree of wear of: the chain, brake pads, brake discs, gears, tires.

The warranty only applies to the first owner

TOSABIKES designates bicycle categories from 0 to 5, which differ significantly in terms of their use.

Category 0. Allowed use: These bikes are for children only. Bikes in this category must not be used by teenagers or adults. Children should never ride a bicycle unsupervised. In addition, children should always ride off public roads and away from other hazards or obstacles, and in a manner appropriate to their abilities. Prohibited use: Children must not ride the bicycle near slopes, curbs, stairs, sinkholes, sewer covers and on roads frequented by motor vehicles.

Category 1. Permitted use: Bicycles intended for use on paved streets or smooth carriageways; for driving on asphalt roads. Prohibited use: Not suitable for off-roading and riding with luggage racks or bicycle bags. Good to know: Depending on the country of use, it may be necessary to equip your bicycle with reflectors, reflectors, guards, etc., for riding on public roads in order to comply with national legislation.

Category 2. Allowed Use: Riding on cobblestone or level roadways, riding on unpaved local roads and gravel roads, as well as roads with moderate ascent/descent. Contact with uneven ground is possible. Jumps must not exceed a height of 12 cm. Prohibited use: Not suitable for off-road use beyond this range and for use as a mountain bike or for various freestyle tricks. Although some of these bikes have suspension systems, they are only used to improve ride comfort, not to make them suitable for off-road riding. Good to know: These products should be considered sports equipment. If the bike is not equipped with active lighting (rear light, headlight) and passive lighting (reflectors), then before using it on public roads, it should be equipped with components required in accordance with the law in force in the country of use.

Category 3. Category of bicycles covering the use not only for categories 1, 2, but also additionally riding on undeveloped terrain and technical riding. Permitted use: From easy to demanding terrain (with minor obstacles such as roots, stones and ruts on loose and paved ground) in cross use. Overcoming small obstacles and small ground faults. Prohibited use: not suitable for any extreme riding or jumping, e.g. freeriding, enduro, downhill, freestyle tricks, etc. Good to know: Due to their design and equipment, these bicycles are not intended for use on public roads. Before using the bicycle on public roads, it is necessary to equip it with lighting, cover, etc. in accordance with the regulations in force in a given country. Off-road safety equipment must be regularly checked and, if necessary, repaired by the user or a specialist.

Category 4. This is a category of bicycles that covers the use of categories 1 / 2 / 3. In addition, this category covers downhill to a limited extent. The use of the bicycle in such conditions is strongly dependent on the experience and skills of the cyclist. Allowed to be used: due to the greater suspension travel, it is possible to

overcome more demanding terrain with obstacles and jumps. Prohibited uses: uses outside the stated use. Good to know: Due to the concept and equipment, these bikes are not intended for use on public roads. Before using the bicycle on public roads, it is necessary to equip it with lighting, cover, etc. in accordance with the regulations in force in a given country. Off-road safety equipment must be regularly checked and, if necessary, repaired by the user or a specialist.
Category 5. This is a category of bikes that covers the use of categories 1 / 2 / 3 / 4. Bikes in this category are also designed to perform all types of jumps followed by landing on sloping terrain and to ride at speeds exceeding 40 kilometers per hour. It is also allowed to ride in difficult bumpy terrain. The use of the bicycle in such conditions is strongly dependent on the experience and skills of the cyclist. Good to know: Due to the concept and equipment, these bikes are not intended for use on public roads. Before using the bicycle on public roads, it is necessary to equip it with lighting, cover, etc. in accordance with the regulations in force in a given country. Off-road safety equipment must be regularly checked and, if necessary, repaired by the user or a specialist.

Important annotations

If you do not understand any of the points in this manual, please contact your dealer for clarification. Read the entire manual! Do not rent an electric bike to people who are not trained in using it. Claims arising from improper handling will not be accepted.
Electric bikes are in no way intended for children under the age of 18. The electric bike cannot be used by people who are not able to pedal or control / steer on their own. The seller is not responsible for any injuries or damage to the e-bike!
The ideal weather conditions to use an e-bike are dry days, when the outside temperature is above 10 ° C. When working in lower temperatures, due to physical phenomena, the battery discharges faster. It is not recommended to use an electric bike when the outside temperature is below 0 ° C.
Regular maintenance:
-Keep all components of the electric bike clean
-use only recommended and proven cleaning agents, do not use any chemical solvents
- regularly lubricate the chain with the appropriate oils
-in winter, after each ride, clean the electric bike, especially the battery contacts and other connectors that may be covered with salt and other debris
- When operating the e-bike, be careful not to damage the wiring harness. Damaged cords can cause an electric shock
-Regularly check that all connections are tight and that the brakes are working properly. Also check individual parts of the electric bike for damage. For example: cracks in the frame, fork, handlebars, stem, damaged cables, damage to the battery cover, etc.
-Always remove the electric bike battery when transporting by car
Lithium-ion batteries are fully recyclable. At the end of its life, the battery can be returned to any collection point or dealer.
If the bicycle is used under a heavier load (prolonged use of maximum power assist), long-term riding at higher temperatures (30 ° C and above), in direct sunlight or with a partially discharged battery, and a combination of these situations, the eBike may turn off. It is a safety condition that protects the controller from overheating. In this case, you need to wait for the bike to cool down before you can continue riding. This is not a product defect.

Do not expose the bike to direct sunlight, the bike has a thermal protection sensor for the electric drive. Never immerse the battery, charger or other electrical components in water or any other liquid.

Never wash your e-bike with a pressure washer and always remove the battery before washing.

It is forbidden to interfere with the connection of the electric motor, control unit or battery. Violation of this point may result in the non-recognition of the guarantee for the goods or irreparable damage to the e-bike.
DO NOT use chargers and components other than the ones you received from us with the e-bike. We are not responsible for damages resulting from the use of other non-approved products.

ATOSA

WARRANTY CARD

Brand		Seller's signature and stamp
Model		
Color		Buyer's data and signature *
Frame nr		
Sale date		

Mileage report date Type of fault	Description of service activities	Date of repair Signature and stamp

*** The buyer's signature is tantamount to receiving and reading the "operating manual and goods card". Before the first ride, the buyer should read the "operating manual and goods sheet"**

Md Group Sp. z o.o.
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REGON 521149977
44-200 Rybnik
Kościelna 15

12.05.2022