

# MTF



## Instructions for use of e-bikes



**WARNING:** Read these instructions for use as well as the instructions for use of the appropriate control unit carefully before using this product!

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# PREFACE

Dear users,

Thank you for purchasing an MTF e-bike! In order to ensure your new MTF e-bike functions perfectly, please carefully read the instructions for use provided with this product before riding it. We use these instructions to inform you of all the aspects of correct use of the e-bike, including information for dealing with any unclear issues or defects.

The specifications and images contained in these instructions are not binding and may differ from product to product. The manufacturer reserves the right to make changes without prior warning.

Take the bike to your seller for warranty servicing after riding approx. 200 - 300 km (125 - 185 mi), or within 6 months of purchase at the latest. This inspection may reveal various defects and will contribute to high-quality adjustment of components following initial operation of the bike. Failure to undergo a warranty inspection may be cause for refusal of a claim in the event of related defects.

*Comment: If you do not understand any part of these instructions, please contact your seller.*

## WHAT IS AN E-BIKE

An e-bike is a bicycle with an electric propulsion unit which provides assistance when cycling. The motor is activated by pedalling, which is registered using a special sensor located in the bottom bracket. This means that you must continue pedalling the e-bike, the motor will only provide you with assistance. You can also propel the bike using the control button or accelerator, but only up to the maximum permitted speed, i.e., 3.7 mph (i.e., for assistance when pushing the bike).

The maximum speed of the e-bike with assistance from the motor is 20 mph, within a tolerance of 10% (when this speed is achieved the motor is switched off and you continue pedalling as you would on a normal bike). When the battery is discharged or if the motor is switched off, you can ride the e-bike like you would a normal bicycle, without any resistance.

### **WARNING:**

Mountain and cross bikes (terrain bikes) are purely sports equipment and are not fitted with the equipment compulsory for cycling on roads. These bikes must be additionally equipped for use on roads.

Trekking bikes and bikes from the City bike category are fully equipped for cycling on roads.

### **WARNING:**

Remember that the e-bike, particularly its batteries, require regular maintenance and suitable storage.

### **WARNING:**

Before leaving your e-bike in a public place, always lock the battery and take the key with you. This will prevent any possibility of the battery being stolen.

## SAFETY WARNINGS

- Before using this product, carefully read the instructions for use of the e-bike.
- These instructions notify the user of especially important instructions for safe and correct use. Failure to adhere to these warnings may result in injury to you or another person, possibly to damage to your property or the property of others.
- Always follow the instructions for use in order to avoid the risk of fire, injury by electric current or general injury.
- Before riding the bicycle, make sure that there are no loose or damaged joints. Check the brakes function and the tyre pressure.
- In the event that any part of the e-bike is damaged, take it to a professional servicing facility for repair.
- Neither the manufacturer nor the seller is liable for accidental or subsequent damage or for damage arising directly or indirectly as a result of incorrect use of this product.

*Comment: The weighted acoustic pressure (A) level on the ears of the cyclist is less than 70 dB (A).*

## E-BIKE SYSTEM

The e-bike is equipped with a control unit with LCD panel which controls the electric propulsion unit. You can choose from several levels of performance (assistance) intensity. Motor assistance is reduced as speed increases and is disconnected when a speed of 20 mph is reached. This corresponds to the requirements of the relevant European standard so this product is still considered a bicycle and not an electric scooter.

The e-bike motor will come on after the pedals are turned by approx.  $\frac{1}{4}$  of a rotation. The motor will disconnect 1-2 s after pedalling ceases.

The e-bike also includes a “walking assistance” function. In this mode the bike travels at a speed of 3.7 mph without the need to pedal, which makes it easier to push the bike. This function is not intended for extended cycling.

### NOTE:

A detailed description of the controls for the control unit is given in separate instructions for use, which are included in the e-bike packaging.

## INFORMATION ABOUT THE BATTERY

The Li-ion battery has a very low self-discharge rate. From the first charge cycle the battery must be maintained constantly in its work cycle (discharge/charge) so that even if the e-bike is not being used, in the winter for instance, the battery must still be charged at least once every 4 weeks.

We recommend that you perform one full charge cycle (discharge/charge) before you begin to use the bike. The battery can subsequently be charged at any time. Maximum battery capacity is achieved after approx. 5-10 charge cycles.

Keep the battery charged and always recharge it after you ride the e-bike, not before riding it.

Only use the charger supplied with the e-bike to charge the battery.

## FACTORS AFFECTING THE RANGE OF THE E-BIKE

The e-bike's range cannot be accurately determined as it is affected by many factors. The range displayed on the display can change every time the battery is charged because the system adapts to the amount of stress placed on the e-bike after it was ridden last.

1. **Tyre rolling resistance.** Tyres with a low rolling resistance rating and increased resistance to defects are used on MTF e-bikes. It is therefore important to inflate the tyres correctly. The range is reduced if the tyres are under-inflated.
2. **The weight of the e-bike, the rider and any luggage.** The lower the total weight of the e-bike, the greater the range.

3. The condition of the battery. This depends on whether the battery was fully charged before the ride. You must also count on the fact that the more discharge cycles the battery has completed, the lower its capacity.
4. The route profile and surface. The greater the elevation difference, the worse the surface and the steeper the inclines you travel over, the shorter the range.
5. Riding style. It depends on which cycling mode you have set.
6. Smoothness of cycling. The more you brake or accelerate, the shorter the range.
7. Wind resistance. It depends on whether you are riding a bike with a low frame and sitting upright or riding a sportier bike and have adjusted your saddle to the same height as your handlebars.
8. Wind speed. The stronger the wind behind you, the greater the range, and vice versa.
9. External temperature. The lower the temperature, the faster the battery capacity falls.

**WARNING:**

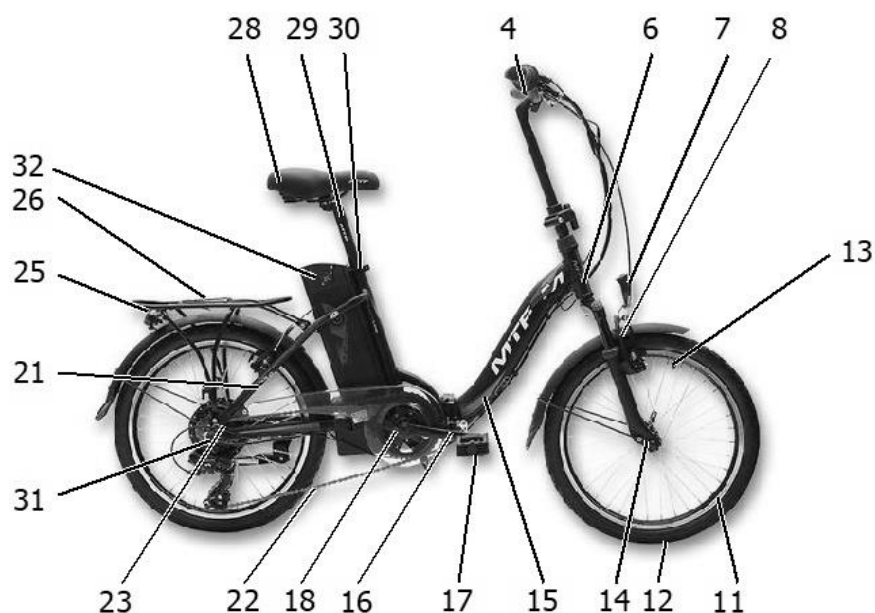
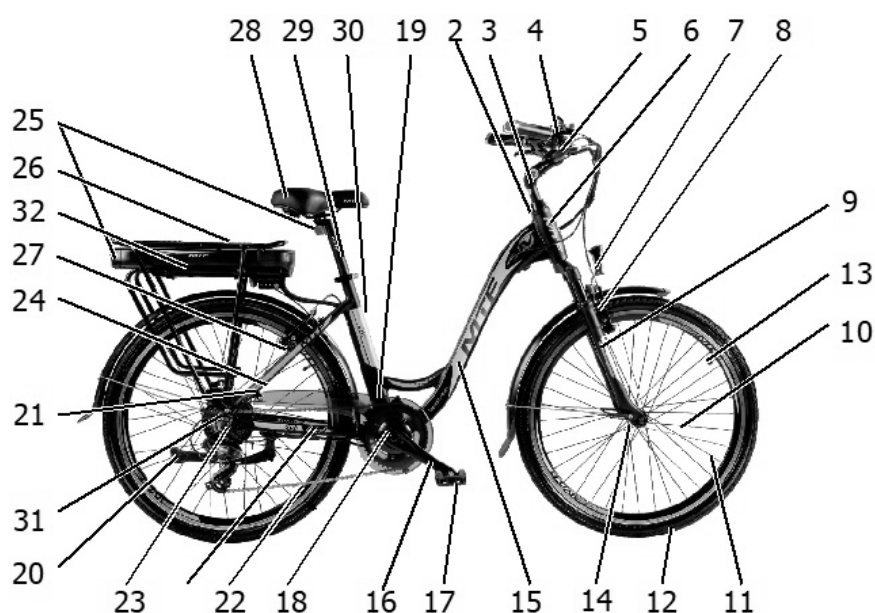
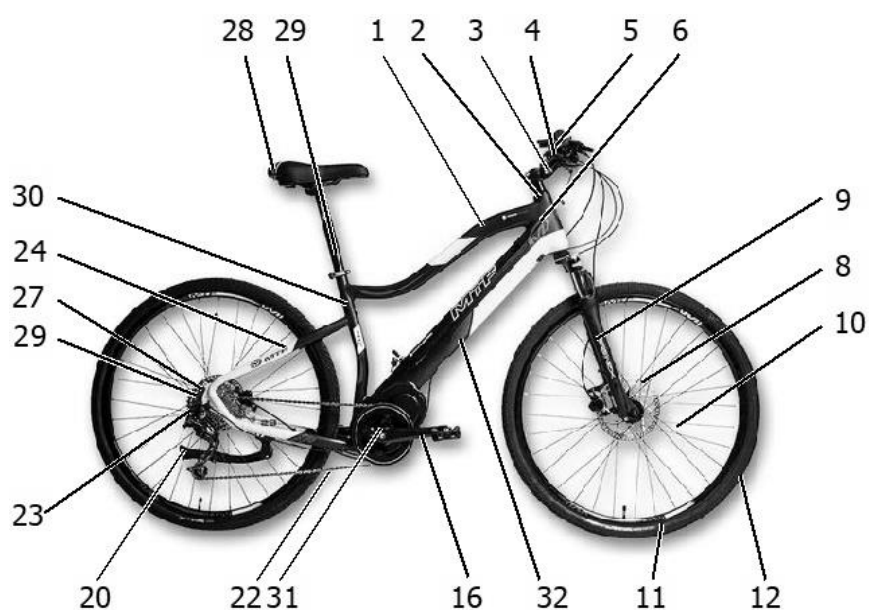
Take especial care to avoid contact with hot surfaces, such as the disc brakes after they have been used for extended periods.

When using your e-bike or carrying out maintenance, make sure you maintain a sufficient distance from the rotating parts of the bicycle. Clothing or body parts can be caught on rotating parts.

Always remove the battery before carrying out any work on the e-bike.



## DESCRIPTION OF THE E-BIKE



1. Top tube
2. Headset
3. Stem
4. Handlebars
5. Brake lever
6. Head tube
7. Front light - reflector
8. Front brake
9. Fork
10. Spokes
11. Rim
12. Tyre
13. Valve
14. Hub
15. Down tube
16. Crank arm with chain set
17. Pedal
18. Bottom bracket
19. Front derailleur
20. Stand
21. Rear frame set
22. Chain
23. Rear derailleur
24. Rear fork
25. Rear light reflector
26. Carrier
27. Rear brake
28. Saddle
29. Seat post
30. Saddle tube
31. Motor in bottom bracket or in rear hub
32. Battery in the frame or on the carrier
33. Battery charger (not shown)

**Comment:** The illustrations and description are only intended for the purpose of explanation of the terms used in these instructions. The supplied e-bike may not contain all the listed parts.

# IMPORTANT INFORMATION - BEFORE YOU SET OFF

## SAFE CYCLING RULES

All cyclists must adhere to the basic rules for cycling safely on roads as stipulated by generally binding legal regulations. There are also specific rules for cycling in off-road.

**Always wear a cycle helmet!**

**Apparel:** correct cycling apparel can improve your experience of riding your bicycle. Special functional cycling apparel can also increase your safety - bold colors and reflective materials improve your visibility. Cycling gloves are also very practical. Be careful wearing loose clothing, particularly trousers, which can easily get caught in the chain. Never ride a bicycle with open shoes.

**Rules for cycling on public roads:** The basic rule is to behave the same as you would when driving a car. Cyclists are fully-fledged road traffic participants.

**Cycling at night:** If you cycle at night, you must equip your bicycle with lights, if it does not already have them. Apparel made from reflexive fabrics is an important supplement to cycling at night.

**Cycling in poor weather:** For cycling under poor visibility conditions bicycles can be additionally equipped with devices for light signalization and lights according to the valid bylaw.

**Fluids:** You should never forget a cycle bottle (bidon) with fluids (can be easily drunk from when cycling, unlike bottles with a screw cap) when going on a cycle trip or longer journey, because your body must receive the fluids it needs while it is performing.

**WARNING:** When using the e-bike on public roads abide by the locally valid road traffic laws. These laws may require that the bicycle and rider carry specific equipment or regulate how you ride your bicycle or transport cargo or other persons.

## RULES WHILE RIDING ON THE PUBLIC ROADS

The basic rule is to behave the same way as you would do while riding a motor vehicle. A cyclist is an adequate road user!

- Ride on the right side of the road in the direction of traffic, never against.
- Respect the traffic signs and light signals.
- Be careful while overtaking cars, drivers are not used to mind cyclists and they often signal it very poorly.
- Give hand signals in advance when changing the direction.
- Ride right next to the line of parked vehicles - do not turn back to the roadside behind every parked vehicle.
- If your movement is as fast as of the others, ride in the middle of the traffic lane. Drive on the roadside when riding in fast traffic.
- Be very careful when riding through large intersections. It is mandatory to dismount on pedestrian crossings and cross the intersections as a pedestrian.
- Do not ride on pavements unless it is allowed.

Beside these rules it is also recommended to adhere to the following tips to improve your safety:

- A bell may be very helpful.
- Assume that the drivers cannot see you, be very careful when entering or exiting a public road.
- Beware of dogs. Ignore them if you can. Otherwise dismount and position your bicycle between the dog and yourself.
- Beware of road bumps - potholes, canals, railways, slippery pavement, etc.
- Riding in bad weather conditions
- Remember that the breaks are less efficient during rainy conditions. It is important to brake in advance and more carefully than usual. Cycling helmet with an eyeshade may sufficiently protect your eyes and face from the rain.

## MECHANICAL ADJUSTMENT OF THE E-BIKE

### WARNING:

**Always remove the battery before carrying out any work on the e-bike.**

**Frame:** You have probably already chosen the correct size of frame with the help of your retailer.

**Saddle and seat post:** The saddle can be adjusted in three directions - up/down, forwards/backwards, at an angle.

**Saddle height:** Sit on the bike and rest your feet on the pedals with one pedal in the position lowest to the ground. If the saddle is at the correct height the leg with the foot on this pedal should be slightly bent at the knee. Saddles that are too high cause excessive strain on the back and stretch the legs and hips too much. A saddle that is too low strains the knees and thigh muscles. The rule is that if you have both feet on the pedals, while the leg being measured is in front, there should be a vertical line passing through the knee and the centre of the pedal.

**Handlebars and stem:** The maximum permissible extension height is marked on the stem. Never extend the stem above this mark! This will prevent damage to the stem and the risk of it potentially fracturing and resulting injury!

**Luggage carriers:** The bicycle is suitable for installing a carrier or child seat. If you equip your bicycle with a carrier, be aware that the frame is constructed to carry a total weight of 120 kg, i.e., the cyclist and luggage. Carrying excessive weight may cause damage.

## PRE-RIDE INSPECTION

The service life of the frame or components is influenced by the design and the used material, as well as maintenance and the intensity of use. Regular inspections by a qualified professional should become a matter of course and will prevent many technical issues the consequences of which could be catastrophic. You are responsible for inspecting your e-bike before every ride.

**Before you set off:** Test the bicycle by lifting it approximately 10 cm above the ground and letting it go. This will establish that nothing is loose. Then perform the following quick inspection:

1. **Wheels and tyres:** Check that the wheels are centred and that no spokes are loose or missing. Check the quick-release screws in the wheel hubs, the tyre pressure and wear. The maximum tyre pressure is specified on the rim or tyre.
2. **Brakes:** Press both brake levers and push the bike forward. The brake shoes should press against the rims (discs), but the brake levers should not touch the handlebars. Make sure that the cables are not frayed or excessively twisted. The cables stretch and the brake shoes (pads) become worn over time, which is why the brakes should be regularly adjusted and the worn parts replaced when appropriate.
3. **Gear system and chain:** Clean the chain regularly and lubricate it using the appropriate product. The chain naturally stretches over time and must be regularly replaced. Stretched or damaged chains can seriously damage the chainset or sprocket wheels.
4. **Frame:** A bent or cracked frame should be replaced immediately. Never try to straighten or fix the frame yourself.
5. **Joints:** Check that the quick-release mechanisms and screws are not loose.
6. **Battery:** Check the charge in the battery.

## CYCLING TECHNIQUE AND ADJUSTMENT OF THE E-BIKE

After you ride the bicycle for the first time, we recommend you check both the brakes, and the front and rear derailleur, as they may need additional adjustment.

**Gear system:** You have a gear changer on the handlebars, which is used to control the rear derailleur. Do not try to change gears when you are not pedaling forwards. It is very important to release the pressure on the pedals when changing gears, this allows the chain to change smoothly between the individual gears and reduces the risk of bending/break the chain or damaging the chainset or sprocket wheels. When cycling up or down an incline, change into the appropriate gear in time. Changing gear when cycling up-hill, when the chain is under strain, causes excessive stress on the entire gear shift system.



**Feet:** Your instep should be on the axis of the pedal. Special cycling shoes make pedaling easier and more effective.

**Torso:** Keep your torso relaxed and in a natural position. Leaning forwards at an angle of approximately 45 degrees is especially effective as it allows the strong buttock muscles to work better.

**Position in the saddle:** Do not remain in the same position. Move back on the saddle to increase power and keep the rear wheel on the ground when cycling down steep inclines. Lean against the handlebars and sit on the tip of the saddle when cycling up steep inclines to keep the front wheel in contact with the ground.

**Braking:** When braking while moving straight forward use both brakes, with more pressure on the front brake lever. However, because there is a higher risk of falling over the handlebars when braking with the front brake, you must learn to gradually apply pressure to both brakes with more pressure on the front brake lever to avoid the risk of falling over the handlebars. Never use the front brake alone to avoid the risk of falling over the handlebars.

You should apply pressure to the brake levers in such a manner that the wheels do not lock up. As soon as a wheel locks the tyre loses adhesion with the road surface and this reduces the effect of the brakes. Before you cycle on the road, try braking in an area with low traffic.

When braking in a bend, never use the front brake, or only very moderately! Apply pressure to the front brake lever before the bend (possibly also to the rear brake lever if necessary), do not brake while travelling around the bend if possible or only use the rear brake. Using the front brake in a bend or on an unpaved surface reduces control over the direction of the bike and increases the risk of the front wheel slipping and the cyclist falling.

Remember that the braking distance and the time needed to stop increases substantially in poor conditions (rain, sub-zero temperatures).

Always be prepared to brake if you are cycling down a steep incline and in areas with limited visibility.

Be careful of any bumps with sharp edges, ducts or drainage channels (risk of tyre defects or falling).

## OTHER RECOMMENDATIONS

**Using a trailer behind the bike:** A trailer is intended for transporting children along pavements, not very busy roads and trails with a level surface during the day. Use it in compliance with the specified limits. You can also transport cargo in the storage areas intended for this purpose if this does not endanger the children in any way. If you want to use the child trailer when visibility is poor, for instance at dusk or when it is dark, we definitely recommend that you use a set of lights complying with safety standards.

**Non-recommended use:** We do not recommend using the trailer in any other way than in the way specified above. It is not intended for transporting animals together with people, when cycling along uneven terrain off paths, using it for commercial purposes or overloading the trailer, riding too fast or amateur performance of repairs or modifications. The weight of the cyclist plus trailer must not exceed 120 kg. The manufacturer is not liable for any damage incurred as a result of use of the trailer in a manner not recommended by the manufacturer. Such use is always at the user's own risk.

### Use of child seat

- After installing the child seat, always check that all the parts have been installed according to the instructions and that all the connections have been tightened properly. Always use an approved child seat.
- The handling of the e-bike changes when transporting a child. Make a trial run with the child to try out how the bike now behaves.
- With regard to the fact that the possibility of the child releasing itself from the protective system cannot be avoided, the spokes and chain of the e-bike should be covered if possible, in the area where the child seat is installed.
- The parts of the suspension seat post should also be covered so the child cannot catch its fingers in the moving seat post mechanism.
- Never transport a child without a seatbelt and without attached footrests.
- With regard to the fact that there is an increased risk of injury to the child in the case of an accident (fall), you should never transport children in the child seat without a cycle helmet.
- Never leave the child alone in the child seat when you park the e-bike.

## **WARNING:**

Be aware that the child's movement can cause the bike to lose balance and tip over.

# **MAINTENANCE OF THE E-BIKES - ELECTRICAL SECTION**

## **REMOVING THE BATTERY FROM THE E-BIKE**

### **WARNING:**

Before removing the battery, ALWAYS switch the e-bike system off using the controls on the handlebars.

#### **BATTERY REMOVAL for BAFANG drive:**

##### **Battery with case located above the frame tube**

In order to remove the battery from the frame of the e-bike, proceed according to the following instructions:

1. Insert the key into the lock and unlock it.
2. Remove the battery cover.
3. You can then remove the batter by pulling it upwards.
4. To re-install the battery, insert it back into its place, attach the cover and lock it with the key.

##### **Battery without a case located below the frame tube 1**

In order to remove the battery from the frame of the e-bike, proceed according to the following instructions:

1. Insert the key into the lock and turn, the battery will spring up.
2. Turn the safety mechanism to release the battery completely. Be careful, hold the battery, otherwise it will fall out of the frame.
3. To re-install the battery, simply snap it in and lock with the key.

##### **Battery without a case located below the frame tube 2**

In order to remove the battery from the frame of the e-bike, proceed according to the following instructions:

1. Insert the key into the lock and turn, the battery will spring up.
2. Pull the battery, the latch will release. Be careful, hold the battery, otherwise it will fall out of the frame.
3. To re-install the battery, simply snap it in and lock with the key.

##### **Battery on the luggage carrier or located horizontally behind the seat post**

In order to remove the battery from the frame of the e-bike, proceed according to the following instructions:

1. Insert the key into the lock and turn the key to unlock.
2. You will subsequently be able to remove/insert the battery from/into the frame.

## **CHARGING THE BATTERY**

#### **BATTERY CHARGING for BAFANG drive:**

The li-ion battery has a very low self-discharge rate. The battery must be maintained in a working cycle (charge/discharge) from the first time it is charged, so that even if the e-bike is not being used, in winter for example, the battery must be charged at least once every 4 weeks.

We recommend that you perform one full charging cycle (discharge/charge) when you begin to use the bike. You can then charge the battery at any time.

The battery is fully charged if all the pilot lights on the scale showing the battery charge level are lit. The scale on the handlebars controls only shows the approximate battery charge level. The indicator on the battery shows a more accurate charge level. If only one pilot light is on/flashing, the battery requires recharging.

If the battery charge is low, the motor stops running smoothly and may run with interruptions (in fits). In this case you must switch the electric propulsion system off. Continue cycling without motor assistance and ensure that the battery is recharged. You can continue using the electric propulsion system as soon as you recharge the battery.

### **Safety instructions for the battery**

- Do not short the positive and negative poles of the battery (using a wire, for instance).
- Never try to charge a damaged battery.
- Incorrect use of the battery may lead to overheating, explosion or self-ignition and cause serious injury.
- Only use the charger supplied by our company to charge the battery, or possibly a charger with identical parameters.
- The battery must be suitably packaged and protected against a short circuit between the contacts during transport or storage.
- Range of permissible temperatures for charging the battery: 0° to 45 °C, and for discharging: -20° to 45 °C.
- Permitted relative humidity when the battery is in operation: less than 80%. Protect the battery against water and moisture. Do not immerse the battery in water.
- Keep the battery out of reach of children.
- Do not pierce the battery or break it up, and protect it against other mechanical damage.
- Do not disassemble the battery or modify it. The battery is equipped with various safety devices. When any of these safety devices is damaged it may cause overheating, explosion or self-ignition of the battery.
- Do not leave the battery near an open fire, stove or other sources of heat. Keep the battery away from direct sunlight and do not leave or use it in a car in hot weather.
- If the battery will not be used for an extended period, you must remove it from the bicycle and store it.
- Charge the battery at room temperature, otherwise, the battery could suffer serious damage or its service life may be reduced. Do not charge the battery near acids or flammable materials.
- The battery and the charger heat up during the charging process. This is normal and not considered a defect.
- If an unusual odour, overheating, changes to the colour or shape or other abnormalities occur during charging/discharging, immediately stop charging/using the battery.
- During incorrect use, liquid may leak or vapours may escape from the battery. Avoid contact with the leaking fluid. If you do come into contact with this fluid, rinse the affected area with water. If the liquid comes into contact with your eyes, seek medical aid after flushing them. The leaking liquid may irritate the skin or cause burns, the vapour may irritate the respiratory system. Ensure a supply of fresh air and seek medical aid if you suffer any difficulties.

### **Safety instructions for the charger**

- Children aged 8 or older and persons with reduced physical, sensory or mental skills, or with insufficient experience and knowledge, may use this device under supervision or if they were instructed in the safe use of the device and understand the potential risks. Children are not permitted to play with the device. Children must not carry out cleaning or maintenance if they are not being supervised.
- Do not use it to charge batteries for which the device is not intended.
- Connect the charger to the battery and then to the mains socket supplying a voltage and frequency corresponding to the values stated on the charger label.
- Never connect or disconnect the charger with wet hands.
- Use the charger inside in a well-ventilated area, do not cover it during charging and keep it on a stable surface in a safe place.
- Do not use the charger in excessively dusty or humid environments or in direct sunlight.
- Never connect a damaged charger or connecting cable to the mains. Never disassemble or repair the charger. If the supply cable is damaged it must be replaced with a new one. Contact your seller.

## Technical data

See model label on the battery/ charger.

## Procedure for charging the battery

1. Connect the battery to the charger with the outlet connector from the charger so that the connector is firmly inserted into the battery.
2. After inserting the plug of the charger power supply cable into the socket, a red LED light will come on and this will change to green when the battery is fully charged (the description of charged status may differ depending on the model of the supplied charger).
3. There is no need to monitor charging, everything is controlled automatically and the charger will switch to maintenance mode once the battery is charged.
4. When the battery is fully charged (the pilot light is green), remove the plug from the socket and then remove the charger connector from the battery. You cannot damage the battery by interrupting the charging process.

**Note:** The charging period depends on the capacity of the battery and how much charge it has left.

**Note:** The battery can also be charged when it is removed from the frame of the e-bike. In this case, first remove the battery from the bike frame. If you charge the battery while it is installed on the bike, the electric propulsion system must be switched off.

## Storage, maintenance and transport

1. If you need to store the battery for an extended period, it should be fully charged. The battery should be regularly charged every two months.
2. Store the battery and charger in a dry and well-ventilated area, at an ambient temperature of 0 - 35°C and a relative humidity of up to 65%. Avoid storing the battery near corrosive substances and make sure that it is at a safe distance from excessive heat and open fire.
3. When storing the battery, disconnect the charger from the battery and from the electric mains.
4. During transport the battery and the charger should be packaged in a box, protected against impact, vibrations and against water. These devices can be transported by car, train, ship, plane, etc.

# MAINTENANCE OF THE E-BIKE - MECHANICAL SECTION

## WARNING:

Do not ride the e-bike if any part is damaged.  
Always remove the battery before carrying out any work on the e-bike.

## WARNING:

You need specialist knowledge and tools for most work on your e-bike. Do not try to carry out any repairs or adjustments which you are unable to perform perfectly. Incorrectly performed repairs or adjustments may lead to accidents or to loss of your warranty.

## BRAKES

The right brake lever controls the rear brake and the left brake lever controls the front brake.

**The brake lever** should always be attached firmly to the handlebars. It should not touch the handlebars when pressed. If this occurs, the brake cable must be tightened.

**The brake** consists of two arms. Regularly check that the brake is correctly centred. If not, let a professional carry out the adjustment. Every cyclist should be capable of at least basically adjusting the brakes. Major repairs, such as tightening or replacing the cables, or replacing the brake pads, should be entrusted to a servicing facility.

Correct brake functioning also depends on the condition of the wheels themselves. If there is play in the wheels or if they are buckled and wobble to the sides or up and down when turned, they need to be adjusted or trued. Truing the wheels is not easy - contact a professional. If the brake discs are buckled or otherwise damaged, they must be replaced. The brake shoes (pads) will wear over time and must be replaced. Excessive braking noise may be caused by inappropriate adjustment.

**Cables and Bowdens** should be checked regularly. Check to make sure that the cables are not frayed and the Bowdens are not bent or cracked.

### Pay attention to the following points:

- Always test the brakes before going for a ride to make sure they are fully functional.
- Press the brake levers while you are standing still, using more force than usual to exclude any potential damage to the connecting elements or cables.
- In the case of rim brakes, check that the brake shoes and rims are clean and are not contaminated with lubricant (oil) residues or other greasy products. Check that the entire surface of the brake shoes fits tightly to and encloses the rims and that it does not touch the sides of the tyres.
- Check the brake shoes regularly, they should not be excessively or irregularly worn.
- New brake pads in disc brakes will only achieve optimum performance after a specific minimum period of use, brake carefully when they are new and be aware that the braking performance of new pads will increase.
- Always keep the surface of brake discs clean and degreased.

## WARNING:

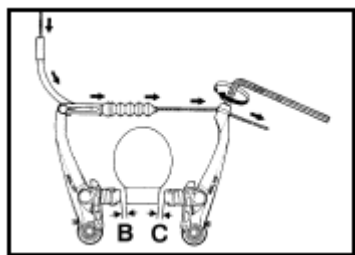
Always check the Bowden cables to make sure they are not damaged.

In your own interest, it is better to entrust servicing work on the brakes (apart from normal maintenance) to a specialised seller!

Adjustment of the height of the handlebars may affect adjustment of the brakes!

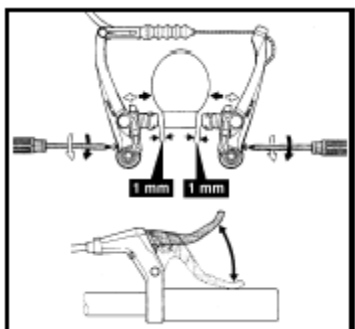


## "V" type brakes



### Brake adjustment

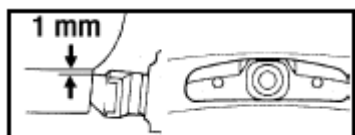
1. Press the brake shoe against the rim and tighten the retaining screw (socket screw).
2. After releasing the brake shoe, the B and C distance between the brake shoe and the rim should be approximately 1 - 2 mm.



3. Use the regulating screws to adjust the distance between the shoes and the side of the rim to 1 mm (evenly on both sides).

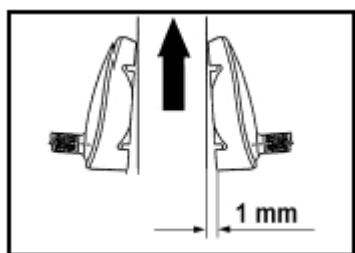
*Comment: In some types of brake there is a pretension regulating screw on only one brake arm.*

4. Press the brake lever several times all the way to the handlebars to verify the brake action and then check brake adjustment once more.



### Adjustment of the brake shoe

The brake shoe should be aligned according to the attached image.



*arrow = direction of wheel rotation*

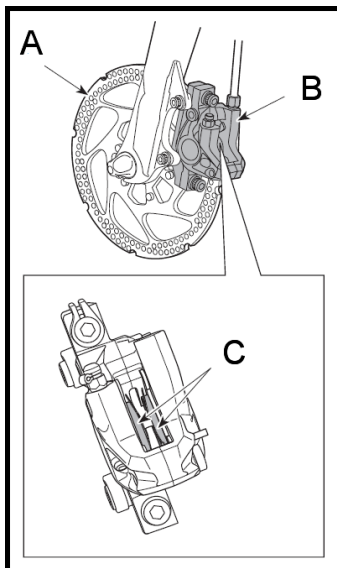
## Disc brakes

Disc brakes are distinguished by their excellent braking performance and good resistance to poor weather. They react much more powerfully than rim brakes when it is wet. They also do not require a lot of maintenance and do not wear the rims like rim brakes. However, disc brakes have a tendency to be noisy if they are wet or dirty.

The brake levers can be adjusted to the size of your hands, which leads to more effective control. In most cases they are adjusted using a small socket screw in the lever.

In mechanical disc brakes, the range of movement of the brake lever increases as the brake pads wear, which requires regular adjustment of the brakes. To adjust the range of movement of the lever use a small screwdriver to turn the adjusting screw located in the lever adjustment case. Worn brake pads can be compensated for on the brake lever to some degree. Loosen the connecting nut on the screw through which the cable passes into the lever and then loosen the screw until the lever has the required range. Then tighten the securing nut again.

Hydraulic disc brakes are equipped with a mechanism that automatically compensates for wear. To adjust the range of movement of the lever use a small screwdriver to turn the adjustment screw located in the case. Gas pockets can occur when braking continuously for extended periods. Release the brake lever intermittently to avoid this. A gas pocket is a phenomenon that occurs when the fluid is heated, when water or air bubbles in the brake system start to expand. This may cause the brake lever resistance to fall suddenly.



**Comment:** After disassembly of the wheel, we recommend you insert a suitable spacing insert between the brake pads (C). If a wheel is not fitted in the fork, do not press the brake lever. If the brake lever is pressed without a spacing insert in place, the pistons extend more than usual. If this occurs the brake disc (A) cannot be inserted back into the calliper (B). Contact your seller to resolve this issue.

Check the wear of the brake pads (C) regularly. If the brakes produce noise when braking, the brake pads may be worn to the usable limit. Wait until the brakes are cool enough and then check the thickness of all the brake pads. If it is less than 0.5 mm do not use the bike and contact your seller.

If the brake disc is deformed or cracked, do not use the bike and contact your seller.

### WARNING:

New brake discs must be “bedded-in” before they achieve their optimum braking performance.

Disc brakes heat up when braking, do not touch the disc or the arms, especially immediately after they have been used.

If there is no resistance when you press the brake lever, immediately stop using the bike and contact your seller.

Only use alcohol or special products to clean the brake pads and discs.

Leaking joints and brake tubes worsen braking performance substantially. Leaking brake fluid can also harm your health and is also harmful to other materials and to paint.

All work on the disc brakes should be carried out by a specialist.

## GEARS

The gear system consists of derailleurs and gear levers, or a grip shift, cable lines and a chain. The derailleurs include springs. Only change gear when the pedals are moving forwards. Never try to change gear when not pedalling or when pedalling backwards. Never use force to try to change gear. Never lay the bike down on its right side, this could damage the derailleurs.

If changing gear is difficult, slow or noisy, or if the chain falls off or rubs on various parts of the bike, adjustment is necessary.

### Easy and comfortable cycling

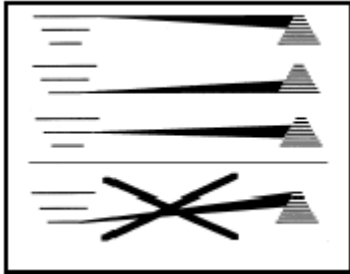
You will enjoy cycling and your performance when you learn to cycle so that the pedalling frequency ranges between 70 / 90 rotations/min, which is the best performance/energy output rate. To ensure optimum pedalling frequency you have various gear modes available, which will help you find the best rhythm under various cycling conditions.

### Please pay attention to the following points:

- Do not stop pedalling when changing gear, but reduce the power used to pedal while you change gear.
- After cycling in the rain, mud, etc., you should clean the moving parts of the gear system and lubricate them.
- Do not change gear across the entire chainset or sprocket at once.
- Never change gear when pedalling backwards (reverse). This could cause the chain and derailleur to lock.

## Gear selection:

- The right gear lever (or grip shift) changes the gears on the rear sprocket.
- The left gear lever (or grip shift) changes the gears on the chainset (if the bike has them).
- Various combinations of sprocket and chainset determine the choice of gear. As soon as you gain more experience changing gear, you will recognise the gear most suitable for specific cycling conditions.



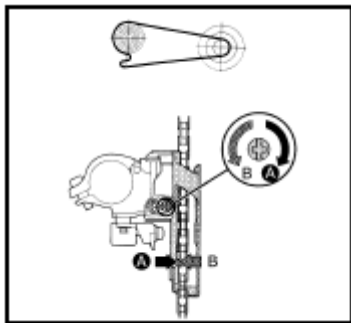
## Recommendations

If the bike is equipped with a front derailleur, the following gear combinations should be used according to the picture to the left, in order to avoid increased wear or even damage to the chain, sprockets or chainset:

- Large chainset (front) - small sprocket (rear)
- Small chainset - large sprocket
- Medium chainset - medium sprocket

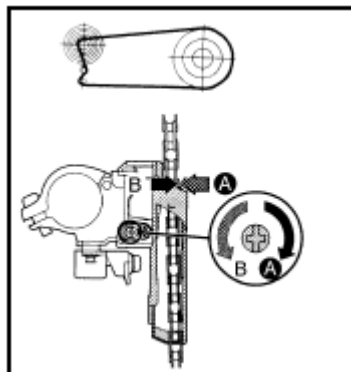
## Adjustment of the front derailleur - limit positions

The derailleur is equipped with limit screws which limit the range of movement of the derailleur and prevent the chain from falling off the smallest or largest chainset.



### Adjusting the lower limit

1. Change gear so that the chain rests on the smallest chainset and the biggest sprocket. The gear change cable should not be pre-tensioned.
2. Turn the regulating screw in direction A or B so that the distance between the internal chain guide and the chain is 0.1 to 0.5 mm.



### Adjusting the upper limit

1. Change gear so that the chain rests on the largest chainset and the smallest sprocket. The gear change cable should not be pre-tensioned.
2. Turn the regulating screw in direction A or B so that the distance between the internal chain guide and the chain is between 0.1 and 0.5 mm.

The limit adjustment screws are usually identified as “H” (high) for “fast” gears and “L” (low) for “slow” gears. “Fast” gears are gears when the chain rests on a large chainset and a small sprocket. If the screws are not identified, their function must be verified by testing.

The aforementioned limits were adjusted before the bike was sold and should not change position spontaneously during normal use.

## Adjustment of gears

Gears are adjusted by pre-tensioning the cable in the lowest position of the derailleur. The derailleur cable is prone to stretching, which reduces accuracy during gear changes. If necessary, the cable can be

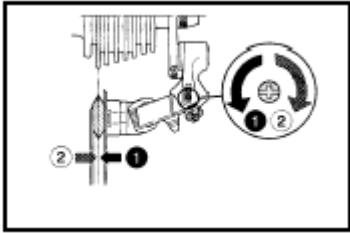
tensioned or loosened by turning the adjustment screw through which the cable passes into the gear shift lever (or grip shift).

### Adjusting the rear derailleur- limit values

The derailleur is equipped with adjustment screws (again marked “H” and “L”), which limit the range of movement and prevent the derailleur and chain from colliding with the wheel spokes or the chain from falling off the smallest sprocket.

Order:

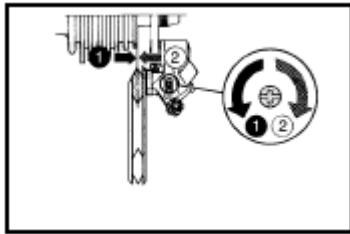
1.



#### Adjustment of the upper limit

1. Change gear so that the chain rests on the smallest chainset and the biggest sprocket.
2. Turn the regulating screw so that the guide pulley is located directly under the biggest sprocket and cannot move any further in the direction of the wheel spokes. Adjust the gear cable to its pre-tensioned position using the regulating or locking screw.

2.



#### Adjustment of the lower limit

1. Change gear so that the chain rests on the biggest chainset and the smallest sprocket.
2. Turn the regulating screw so that the guide pulley is directly under the smallest chainset and cannot move any further in an outwards direction towards the rear frame tubes.

The aforementioned limits were adjusted before the bike was sold and should not change position spontaneously during normal use.

### Adjustment of gears

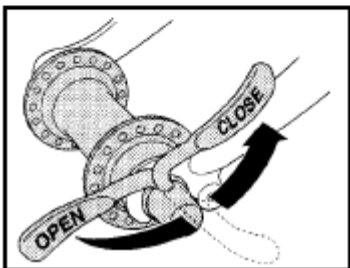
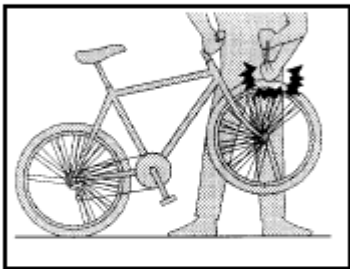
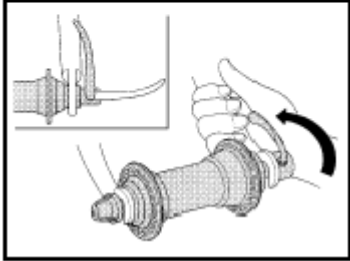
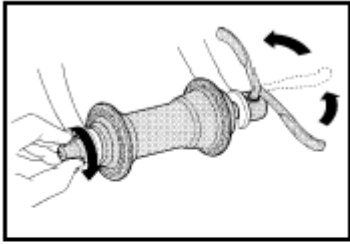
Gears are adjusted by pre-tensioning the cable with the derailleur positioned so that the chain rests on the smallest sprocket. The cable is prone to stretching as in the front derailleur. If necessary, the cable can be tensioned or loosened by turning the adjustment screw by the derailleur or by turning the adjustment screw through which the cable passes into the gear shift lever (or grip shift). After the cable has been tensioned correctly, check to make sure that the chain jumps easily to the next sprocket. You need to turn the crank arms for this or check that the system is functioning correctly while cycling.

## WHEELS, TYRES AND VALVES

The wheels are subject to significant stress, which is caused by the weight of the cyclist and any other items you may be carrying, and the unevenness of the terrain over which the bike moves. This is why we recommend that you inspect the wheels regularly, particularly to make sure that their crucial components are not excessively worn and that the wheels turn smoothly. If you have any concerns you should contact a specialised seller (servicing facility). After each accident check the wheel spokes to make sure that there is no damage.

### Hub with quick-release mechanism

The front and rear wheels of most MTF bicycle models are equipped with easy-to-use quick-release mechanisms, which simplify mounting and removal of the wheels.



## Mounting the wheel

1. Release the lever of the quick-release mechanism, loosen it by several turns and then insert the wheel into the fork.
2. Tighten the regulating nut until you feel slight resistance.
3. Close the lever of the quick-release mechanism so that the side bearing the word CLOSE faces outwards and so that the lever is parallel to the fork. You must use a certain amount of force to close the quick-release mechanism. When closing the mechanism you will feel more resistance as the lever is pushed closed the last third of the way, not before.
4. Check that the wheel is correctly fitted in the fork and centred (that the rims and tyres of the wheel do not graze the brake shoes / pads, or possibly the rear fork structure).

## WARNING:

The quick-release mechanism should never be tightened using just the regulating nut without subsequently securing the mechanism with the lever!

If the wheel is incorrectly secured, it may fall out of the fork when you are cycling, resulting in serious injury!

Check the condition of the quick-release mechanism, if possible every time before you ride the bike to make sure that the wheels are correctly secured in the frame.

Lift the e-bike by the handlebars several times so that the front wheel is in the air. The front wheel should not come loose and should never have a tendency to fall out of the fork. If you have any concerns, mount the wheel properly again.

Make sure that the lever is pushed fully into the CLOSED position (close - see pic). When the mechanism is closed it must not be possible to rotate the lever.

## Removing the wheel

Front wheel:

1. Disconnect the brake cable if this is necessary for removing the wheel from in between the brake shoes.
2. Release the quick-release mechanism, loosen the regulating nut by several rotations and remove the wheel from the fork.

Rear wheel:

1. Disconnect the brake cable if this is necessary for removing the wheel from in between the brake shoes.
2. Change gear so that the chain rests on the smallest sprocket.
3. Release the quick-release mechanism and loosen the regulating nut by several rotations.
4. Push the derailleur backward, which will release the chain from the sprocket, and remove the wheel from the fork.

For models with rear motors, it is necessary to first disconnect the connector of the motor cable that runs under the chain, and then remove the rear wheel and perform the necessary actions. The connector is



disconnected by pulling (it is not threaded) - be careful, it is stiff due to the watertightness of the connection. When reconnecting, place the connectors in the correct position with the arrows facing each other and force them all the way in.

***Comment:** In the case of brake discs, we recommend you insert a suitable spacing insert between the brake pads after you remove the wheel. If there is no wheel in the fork, do not press the brake lever. If the brake lever is pressed without a spacing insert being inserted, the pistons will extend more than usual. If this occurs the wheel cannot be re-assembled. See section BRAKES, page 12.*

## Mounting the wheel

Reverse the procedure for removal:

1. Insert the wheel into the fork flanges.
2. Before tightening make sure that the rear and front wheels are properly centred in the fork.
3. Secure the wheel with the quick-release mechanism.
4. Connect the brake cable and check the function of the brakes, particularly make sure that the brakes do not graze the rim or the discs graze the brake shoes or pads. If necessary adjust them slightly using the regulating screws.

## Defects

In case of any defects, proceed in the following recommended manner:

1. Before you start removing the wheel, first of all check that the valve is not leaking. In order to perform this inspection, pump the tyre up and apply saliva to the valve outlet. If bubbles appear around the valve, this indicates that air is leaking from the valve, which means that the valve is damaged or loose.
2. Remove the wheel, unscrew the protective cap, or the securing nut on the valve.
3. Press the tyre against the valve into the rim bed, then lift the tyre near the valve over the edge of the rim and lift it along the entire circumference of the rim. If necessary, use tyre levers, never use any tools with sharp edges to remove the tyre.
4. Remove the inner tube, pump it up, find out which part is damaged and repair it using an inner tube repair kit (see instructions for use of the inner-tube repair kit).
5. Before inserting the inner tube back into place, check the condition of the tyre and the rim bed and try to find the defective area and remove any foreign bodies from it (stones, glass shards, nails, etc.). Also straighten the rim band.
6. Insert the inner tube back into the rim and inflate it a little, otherwise there is a risk that it will be pinched between the rim and the tyre and puncture. Carefully pull the valve through the appropriate hole in the rim.
7. Place the tyre back into the rim bed along its entire perimeter. Start next to the valve and use tyre levers if necessary (most tyres can be reinserted by hand). The valve must be perpendicular to the rim, not diagonal.
8. Use your fingers to move the tyre from side to side, left to right, along the entire circumference so that it perfectly fits and to minimise the risk of the inner tube being pinched between the tyre and the rim.
9. Inflate the inner tube and check that the fitted tyre is centred.
10. Mount the wheel into the fork.

## WARNING:

**We recommend you replace the inner tube with a new one every time it is punctured.**

**If the tyre has a tread that runs in a specific direction, you must adhere to the direction of rotation when re-mounting the tyre and the wheel! The prescribed direction of rotation is usually marked on the side of the tyre by an arrow, or arrows and the lettering ROTATION. Also check that the tyre is inflated to the correct pressure (see following chapter).**

**Check that the brakes have been adjusted correctly and that they work correctly.**

**Also check that the quick-release mechanisms (or screw connections) are tight enough (see preceding paragraph Mounting the wheel).**

## Tyre pressure

Tyre pressure is a very important parameter which allows the tyre to roll smoothly and ensures a long service life. We recommend that you check the tyre pressure with a manometer when inflating the tyres. Also pay attention to various types of valve (see the “Valve” paragraph).

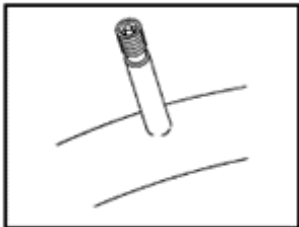
The size of the tyre and the tyre pressure range are given on the side of the tyre. The maximum permissible tyre pressure is usually specified in bar, kilopascal (kPa) or PSI. The optimum range or minimum tyre pressure is sometimes prescribed on the tyre. See below for the conversion rate between the different pressure units:

$$\begin{aligned}1 \text{ bar} &= 1 \text{ atmosphere} = 100 \text{ kPa} = 14.50377 \text{ PSI} \\1 \text{ PSI} &= 0.06894757 \text{ bar} = 6.894757 \text{ kPa} \\1 \text{ kPa} &= 0.01 \text{ bar} = 0.1450377 \text{ PSI}\end{aligned}$$

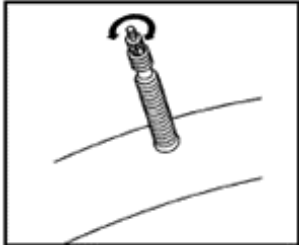
### WARNING:

Never inflate the tyres to a pressure exceeding the maximum permissible pressure value. If the tyre is over-inflated it may self-destruct suddenly when you are cycling. When you use a device for supplying compressed air (e.g., compressors at fuel stations), you will inflate the tyre to the required pressure very quickly. This is why you should proceed very carefully when inflating the tyre and check the tyre pressure using a manometer after inflation if possible.

## Valves



**Schrader valves** are the same type of valve used on car tyres. In order to inflate the tyre, you have to remove the valve cap and push the pump onto the end of the valve. If you need to release air, press the middle of the valve with your finger or an item with a sharp point.



**Presta valves**, compared to Schrader valves these valves are smaller, are more resistant to higher inflation pressure and have a more aesthetic appearance. In order to inflate a tyre with this valve you need to remove the valve cap and loosen the locking screw. Before inflation, press the end of the valve briefly, which will release some air and empty the valve. Then push the pump onto the end of the valve and inflate the inner tube. Don't forget to tighten the valve locking screw back in place.

## Recommendations

When purchasing a new inner tube, check that the type of valve corresponds to the valve used on your e-bike.

## Rims

Always keep the surface of the rims clean and free of grease. Greasy rims substantially reduce the effect of the brakes.

The wheel rim is mechanically most highly stressed when cycling over uneven ground and when braking. Friction as a result of braking causes wear of the rims. As soon as the wear on the rim reaches certain limit values, the rim may start to deform under the pressure of the tyre. If in doubt contact your retailer and ask them to check the thickness of the rim. Some modern rims are fitted with so-called wear indicators by means of which critical wear of the rim is visible.

### WARNING:

The groove along the entire circumference of the rim indicates the wear on the rim. If the groove is no longer visible, stop using the rim. If you continue to use the rim it could crack and cause the cyclist injury.

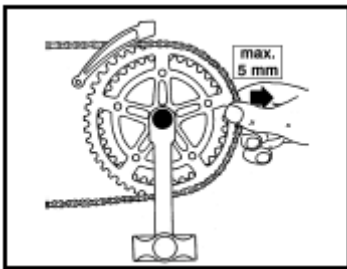
## CHAIN

The chain transfers power from the pedals to the rear wheel and is one of the most highly stressed components on the bicycle. **This is why care of the chain deserves special attention!** It is very important to keep the chain clean and lubricated. Before lubricating the chain you must clean it thoroughly. Any sand or small particles that adhere to the chain as you ride the bike rapidly reduce its service life. Correct and regular maintenance substantially extends the service life of the sprockets, chainset, and front and rear derailleurs. Under stress the chain stretches over time and needs to be replaced. If you do not replace the chain in time, the chainset and cogwheels may be damaged. This is why you have to have the chain measured regularly by your mechanic!

### Adjustment and installation/removal

The chain is kept correctly tensioned by the derailleur.

The chain has special connecting pins which should only be disconnected and connected by a specialised worker using a special tool. However, if you use a high-quality chain tool you can also replace the chain yourself.



It is true that even the highest-quality chains always have a limited service life and usability. The chain should be replaced when it can be lifted more than 5 mm above the chainset (see pic.). The best way to establish the wear on the chain is to use a workshop gauge, which can be purchased from specialised shops, to check the chain spacing.

Chain wear can be monitored regularly using this gauge and the chain can be replaced at the right time, i.e., not prematurely or too late. If the chain spacing exceeds the maximum permitted limit, the other parts of the gear system, i.e., particularly the sprockets and chainset, can suffer excess wear. **This is why the chain should be inspected regularly and immediately replaced if necessary.**

### Chain care

The chain should be lubricated approximately once a month under normal cycling conditions. If the bike is used more often, it should then be lubricated approximately every 200 km (125 mi). When cycling under difficult conditions (rain, dust, mud) the chain should undergo maintenance much more often, possibly every time the bicycle is used!

There are a number of lubrication products intended for application to bicycle chains available on the market. Proceed as follows when lubricating the chain:

1. Wipe off all excess lubricant residue from the surface of the chain with a dry cloth. Dirt will adhere to this residue with negative impact on the service life of the chain, and of course there is the risk of getting your clothes and also the bike itself dirty.
2. Apply the lubricant in small doses, but evenly over the entire chain, to the inner surface of the chain pins. The sides of the chain should remain dry and clean.
3. After applying the lubricant remove any excess that adheres to the surface of the chain using a dry cloth while turning the pedals counter-clockwise. Only lubricant that remains inside the elements and not on their surface benefits the chain.

Special chain cleaning devices can be purchased from specialised shops (so-called chain washers), which are capable of removing the dirt from even very dirty chains, and restoring them to their original condition, thereby extending their service life. Investing in such a device is certainly worth it for people who cycle often in difficult conditions.

During normal use, not under extreme conditions (rain, dust, mud), the average service life of the chain is approximately 1,000 to 2,000 kilometres, but this varies in individual cases.

### WARNING:

**Always use a chain intended for the relevant type of gear system, if in doubt contact a specialised servicing facility.**

## SUSPENSION FORK

The key prerequisite for proper functioning of the suspension fork is its cleanliness. Keep the sliding surfaces on the suspension fork clean so that no dirt penetrates the seal. Wipe the fork down with a soft damp cloth every time you ride the bike and spray a thin layer of silicone oil onto the sliding surfaces of the fork or lightly wipe them with hydraulic oil.

If the fork is adjustable - damping, firmness and travel, you will be informed of this by the technician when you purchase the bicycle and the procedure for use will be explained to you. Some fork models have optional adjustment of firmness, which requires replacement of some parts of the fork. Always leave this activity to an authorised servicing facility.

In air suspension forks follow the guidelines for pressure depending on the cyclist's weight, specified directly on the fork.

Correct functioning of the fork is only possible after it has been adjusted with regard to the cyclist's weight and cycling style. It generally applies that the fork should travel by about 10 to 25% of the specified total travel distance when the bike is bearing the cyclist's weight. Otherwise, the initial configuration of the suspension needs to be adjusted.

In order to avoid reducing the service life of the suspension fork, you should pay attention to the following before you ride the bike:

- Regularly check the fork to make sure there is no visible damage.
- The position of the brake shoe (pad) against the rim (disc) (optimally 1-2 mm), the play in the brake lever (contact between the brake shoe (pad) and the rim (disc) should occur when the brake lever is pulled in one-third of its range of movement).
- The firmness of the brake mechanism - press the brake lever and push the bike forward and back to make sure no connections are loose.

### WARNING:

After an accident the condition of the frame and fork should always be checked to make sure they are not damaged. If you find any damage, you must immediately take the bike to a specialised servicing facility.

Do not try to make any repairs or adjustments which you are unable to perform perfectly. Incorrect repair or adjustment may lead to accidents. Regularly check that all screws in the suspension fork have been properly tightened.

We recommend that you entrust work on the frame and fork to a specialised servicing facility.

### WARNING:

The forks of MTF e-bikes are only intended for light terrain, never for Freeride, Downhill or for cycling in very difficult terrain.

## HANDLEBARS WITH STEM AND HEADSET

Special attention must be paid to the handlebars in order to guarantee safe cycling under any conditions.

### WARNING:

Before riding the bike, always make sure that all the parts of the handlebars are correctly and firmly secured and that the fork headset (in the head tube) is adjusted without any excessive play. Neither the handlebars, the stem nor their components should have any traces of cracks or forced bending.

The headset is adjusted before the bike is sold. If additional play occurs in the headset this can be adjusted (see below). However, if you are not sure, have the headset adjusted by a specialised servicing facility. For safety reasons the handlebars and stem must be replaced every time they are damaged or deformed as a result of falling, etc.

Never combine handlebars made from aluminium alloy or other light materials with a steel stem.

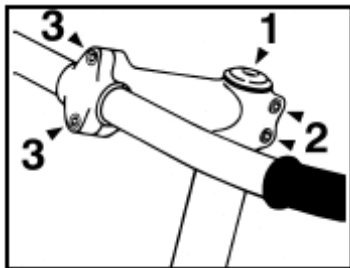
Practical advice: Before riding the e-bike, sit on it and place your hands on the handlebars while letting

your feet rest on the ground. Apply the front brake firmly and move the entire e-bike forwards and backwards. All the parts of the handlebars must remain firm, the headset should not wobble in any direction (the handlebars should not jump backwards or forwards) and the front brake arms should hold firmly. Apply the rear brake in a similar manner and check the stability of the brake attachment. This tests the entire handlebar assembly and the components of the brake system.

**Devote 2 seconds of time to this activity before you set off on a ride to ensure your own safety and the safety of other road users!**

### A-Head type stem (threadless)

The stem is attached to the fork tube from the outside. The play in the headset in this type of stem is adjusted using a screw at the top of the stem. This screw is connected to the fork neck using a so-called “star socket”, which is impressed into the fork neck. The play in the headset can be adjusted only once the main socket screws on the side of the stem have been loosened. When adjusting this assembly, proceed as follows:



In this case you can only adjust the height of the handlebars downwards, by removing the spacing rings from under the stem and reducing (cutting) the fork neck to the required length. You must leave reduction of the fork neck to a specialised servicing facility. If you want to raise the handlebars, you either have to choose different handlebars or a stem with another (higher) angle.

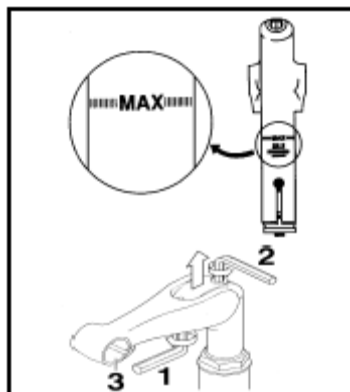
The main adjusting elements of this type of stem are:

1. Lateral screws 2 - levelling the stem in a linear direction.
2. Screw 1 - adjustment of the play in the headset, you **MUST** loosen screws 2 before doing this and then tighten them again after adjusting the play.
3. Screws 3 - adjustment of the angle of the handlebars and movement of the handlebars from side to side.

#### **WARNING:**

**Always pay attention to ensuring that locking screws 2 and 3 are properly tightened before riding your e-bike!**

### Stem with adjustable angle (adjustable stem)



The following adjusting elements are used to adjust the height and angle of the stem and the angle of the handlebars:

1. Screw 1 - adjustment of the angle of the stem
2. Screw 2 - adjustment of the height of the handlebars
3. Screws 3 - adjustment of the angle of the handlebars and movement of the handlebars from side to side.

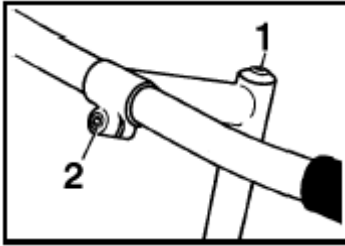
#### **WARNING:**

**Never withdraw the stem from the head tube past the mark for maximum extension (see pic.), this could lead to destruction of the stem tube or head tube!**

### Standard stem (threaded)

The threaded stem is inserted into the fork neck and secured using a long central screw which passes longitudinally through the entire stem. The nut from this screw is conical at the bottom with a diagonally cut cone. Proceed according to the picture below when adjusting this assembly:





The following adjusting elements are used to adjust the height and angle of the stem and the angle of the handlebars:

1. Screw 1 - adjustment of the height of the handlebars
2. Screw 2 - adjustment of the angle of the handlebars and movement of the handlebars from side to side.

**WARNING:**

Never withdraw the stem from the head tube past the mark for maximum extension (see pic.), this could lead to destruction of the stem tube or head tube!

### Handlebar extensions (grips)

Handlebar extensions (grips) are used to increase the versatility of the handlebar grips. Use these particularly if you cycle in a more sporting style or for longer trips.

The attachment screws on the handlebar extensions are used to install and adjust the angle of these devices.

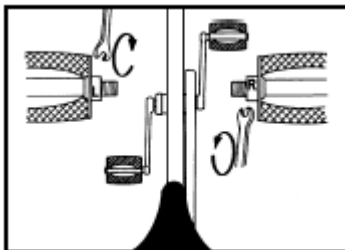
**WARNING:**

Always use handlebar extensions that are recommended for the specific type of handlebar. If necessary, consult a specialised retailer.

**WARNING:**

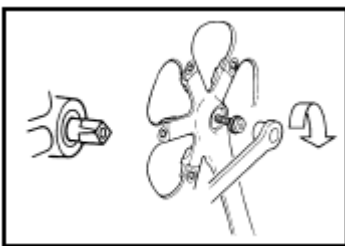
After adjusting the handlebars, tighten all the screws on the handlebars firmly. Loose screws can have a crucial negative impact on your safety when cycling!

## PEDALS AND CRANKS



Each pedal is intended for installation either onto a left or right crank arm. The pedal bearing the symbol "R" is intended for installation onto the right crank arm (crank with chainset) and is tightened by turning to the right. The pedal marked "L" is intended for installation onto the left crank arm and is tightened by turning to the left (see pic.). The aforementioned symbols are usually stamped onto the front surface of the pedal axis.

The converse procedure applies for removal.



The crank arms are attached to the ends of the bottom bracket axis (see pic.) using screws (or nuts). The screws must be periodically checked and their tightness assured. Have this inspection carried out at least once a year by a specialised retailer.

A special tool is usually required to disassemble the crank arms from the end of the bottom bracket axis.

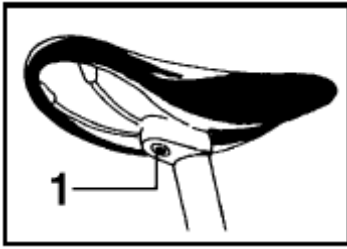
**WARNING:**

If these components are deformed as a result of a fall, impact or similar event, it is a good idea to preventively replace the crank arms and pedals. Hairline cracks, which are not visible to the eye, can cause serious damage to the material, leading to its destruction!

If the bottom bracket is stiff or is distinguished by running roughly, it must be checked by a specialised retailer or replaced if necessary.

## SADDLE AND SEAT POST

### Adjustment of the angle and longitudinal movement of the saddle

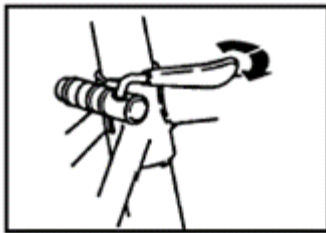


Loosen screw 1, adjust the angle or longitudinal position of the saddle and tighten the screw again.

#### WARNING:

A loose locking screw can lead to damage to the seat post or possibly to injury of the cyclist. A damaged or bent seat post and saddle (following an accident, for example) should be immediately replaced (risk of cracking).

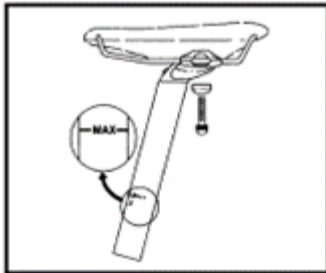
### Adjustment of the height



Loosen the locking screw on the collar of the seat post (or the quick-release mechanism) and adjust the saddle to the required height. Then tighten the locking screw (quick-release mechanism).

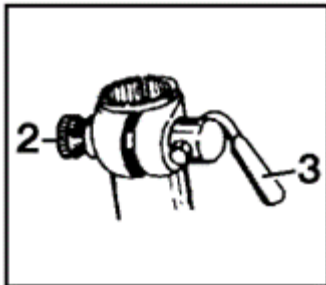
#### WARNING:

Take care never to extend the seat post from the saddle tube above the mark (usually "MAX"), which determines the point for maximum safe extension of the seat post!



If the quick-release system is not able to secure the seat post in the required position (the seat post can be rotated or even pushed into the saddle tube), release the quick-release mechanism lever, tighten the regulating screw 2 (see pic.) and then secure once again by lever 3 of the quick-release mechanism.

When closing the quick-release mechanism you should feel resistance only as you close lever 3 the last third of the way. Never try to tighten the seat post using just the regulating screw 2, this could cause the connection to loosen spontaneously while you are cycling.



#### Recommendation

If the length of the seat post does not allow for comfortable adjustment, you can use a seat post of a different length. Contact your retailer.

### Recommendation

When cycling in open terrain, particularly steep inclines, we recommend you lower the height of the seat post, which will optimise the action of your legs in difficult terrain and also help distribute your weight better for cycling downhill (lowered centre of gravity). If you mark your normal height and lowered height appropriately on the seat post, you will always be able to easily adjust the seat post to the correct height depending on the cycling conditions.

### Telescopic seat post

A telescopic seat post enables the cyclist to easily change the height of the saddle while cycling, without having to stop. There is a lever on the handlebars for this purpose - when you press it the seat post either lowers or rises depending on the pressure placed on the seat post. Then release the lever. Only use the lever when you are ready to change the saddle height.

#### WARNING:

When moving the telescopic seat post downward into the saddle tube (insertion) it is important that the cable guide is simultaneously pulled out of the opening in the front part of the frame (in the direction of the handlebars). If you move the seat post upwards (extension), insert the seat post cable

guide at the same speed as extension of the seat post into the frame of the e-bike.

This will avoid damage to the cable guide, which would prevent proper functioning of the telescopic seat post.

## TIGHTENING ALL THE SCREWS ON THE BICYCLE

Stem, handlebars, brake levers, bottle holder, saddle tube screw, brake arm screws, rear derailleur collar and derailleur screw, screws on the front derailleur, etc. - never exceed the recommended torque specified directly on the individual components - this may cause irreversible damage, particularly to carbon fibre components and parts.

Check that the chainset has all the required screws and that these are tightened properly, particularly the bolt that attaches the crank arm to the axis. If the crank arm comes loose from the axle, you must IMMEDIATELY stop and repair the defect, otherwise, even a short ride with a “loose” crank arm may cause irreversible damage to the crank arms. The tightness of attachment of the pedals to the crank arm must be checked in the same manner.

### TABLE OF TORQUES FOR INDIVIDUAL COMPONENTS

Component	Screw connection	* Nm (ft/lb)
Crank arms	Crank arm attachment screw (with square head, without lubrication)	34 - 44 (25 - 35.5)
	Crank arm attachment screw (lubricated octalink)	35 - 50 (25.8 - 36.8)
	Chain wheel screw	8 - 11 (6 - 8.1)
Bottom bracket	Sealed cartridge in a shell	49 - 69 (36 - 50.9)
	Bowl and retaining ring	49 - 78 (36 - 57.5)
Pedals	Axle	34 (25)
Shoes	Case screws	5 - 8 (3.9 - 5.9)
	Pin	4 (3)
Brakes	Securing screw for attachment to the frame (V-brakes)	5 - 9 (3.9 - 6.6)
	Rotating pin (cantilever brakes)	8 - 10 (5.9 - 7.4)
	Cable securing screw	6 - 8 (4.4 - 5.9)
	Brake pad securing screw	5 - 7 (3.9 - 5.2)
	Securing screw for inserting brake pad facing	1 - 2 (0.7 - 1.5)
Rear derailleur (rear gear changer)	Assembly screw (bracket screw)	8 - 10 (5.9 - 7.4)
	Cable securing screw	4 - 6 (3 - 4.4)
	Cage with pulley screw	3 - 4 (2.2 - 3)
Front derailleur (front gear changer)	Assembly screw	5 - 7 (3.9 - 5.2)
	Cable securing screw	5 - 7 (3.9 - 5.2)
Brake and gear shift lever	Brackets securing screw (socket head)	6 - 8 (4.4 - 5.9)
	Bracket installation screw (screwdriver)	2.5 - 3 (1.8 - 2.2)
	Stop installation screw (frame) - screwdriver	1.5 - 2 (1.1 - 1.5)
	Gear shift securing screw	2.5 (1.8)
Hub	Quick-release mechanism lever	9 - 12 (6.6 - 8.6)
	Nut for adjusting the bearings of the quick-release mechanism hub	10 - 25 (7.4 - 18.4)
Freewheel hub	Freewheel securing screw	35 - 49 (25.8 - 36)
	Freewheel nut securing screw	35 - 44 (25.8 - 35.5)
	Chainset cassette retaining ring	29 - 49 (21.4 - 36)
Stem	Handlebar clamping screw (M5)	10-12 (7.4 - 8.8)
	Handlebar clamping screw (M6)	14-16 (10.3 - 11.8)
	Stem cone expander	19,6 (14.5)
	A headset for securing the fork (M5)	10-12 (7.4 - 8.6)
	A headset for securing the fork (M6)	14-16 (10.3 - 11.8)
	Securing screw on stems with adjustable angle	11-12 (8.1 - 8.6)
Saddle tube	Saddle screw (dual screw system) M5/M6	9-11 (6.6 - 8.1)
	Saddle screw (single screw system) M7/M8	16-19 (11.8 - 14)
	Saddle clamp	12 (8.8)
Bottle holder	Screws	5 (3.9)

\* According to the technical documentation and promotional materials of the component manufacturers.

## CLEANING AND LUBRICATION

**Cleaning:** In order to maintain perfect functioning it is very important to keep the bicycle clean. Dirt and dust mainly damage the moving parts of the bicycle, particularly the chain, sprocket wheel, derailleur and rims. If you cycle in muddy terrain, you must clean the bike after every ride.

**High-pressure water jets are not appropriate for cleaning your bicycle.** Water can penetrate the bearings and the high pressure is capable of stripping away the lubricating oils and grease. It is always best to clean your bike by hand. Never wipe your bike down without wetting it with water first, otherwise, you will scrape the paint and the surfaces of components.

**Lubrication:** Pay attention to all moving parts of the bike, particularly the chain. **Lubrication products intended for cars and motorcycles are not appropriate for use on bicycles.**

- Do not apply excessive lubricant to the derailleurs. An excessive amount of lubricant causes dirt and dust to adhere.
- Avoid applying lubricant to the rims, brake shoes and brake discs.
- It is a good idea to occasionally lubricate the rotating pins on the brake levers and arms.
- It is best to leave lubrication of the traction elements (cables and Bowden's), the hubs, headset, bottom bracket and pedals to an experienced mechanic. These components must be completely disassembled, cleaned, lubricated, reassembled and adjusted.

## MAINTENANCE SCHEDULE

### WARNING:

**Before carrying out any work on the e-bike, always remove the battery first.**

After cycling approx. 200 - 300 km (125 - 185 mi), or within 6 months of purchase at the latest, take the bike to your retailer for performance of warranty adjustment. This inspection can reveal various defects and contributes towards high-quality adjustment of components following initial operation of the bike. Failure to undergo the warranty inspection may be a reason to refuse a claim in the event that a related defect occurs.

If you cycle often and mostly in difficult terrain, proceed according to the following maintenance schedule:

**Before every ride:** check - brake function, gears, the ease of wheel, handlebar and pedal movement, quick-release mechanisms, battery charge.

**Every week, or after approx. 200 km (125 mi):** tyre pressure, trueness of the wheel rims, tightness of all screw connections, tighten callipers and discs in the case of disc brakes, lubricate the chain.

**Every month:** clean, dry and conserve the bicycle, perform a thorough overall inspection, check the chain for stretch with a gauge (from 700 km (430 mi), replace a stretched chain, clean chain, check wear of the tyre design and damage to the sides of the tyres, wear of brake shoes / pads, oil leakage from the suspension fork, saddle attachment, quick-release mechanism on the seat post and wheels, lubricate the brake pins, brake levers, derailleurs and mouths of the Bowdens, clean and lubricate the pistons of the suspension fork above the piston rings.

**Every 3 months:** check that nuts and screws are tight, lubricate the saddle tube and stem.

**Every 6 months:** have a general service performed by a professional servicing facility.

### WARNING:

**Your bicycle, just like all its mechanical components, is subject to wear and increased mechanical stress. Various materials and components can react to wear or material fatigue in various ways. If the assumed service life of components is exceeded, they may fail suddenly and possibly cause injury to the cyclist. Any form of crack, groove or changes in colour at highly stressed points indicates that the end of the service life of the component has been reached and that this component should be replaced.**

### WARNING:

**Damage as a result of impact to components made from composites may not be visible or easily**



established by the user. This is why components made from composites should either be returned to the manufacturer for inspection or disposed of and replaced with new components in the case of any impact.

**WARNING:**

Only use original spare parts for components that are critical from the aspect of safety.

## TRANSPORT, STORAGE AND DISPOSAL

### TRANSPORT OF THE E-BIKE

If you transport the bicycle by passenger car, only use approved carriers, use of which is approved for the specific vehicle.

If the bicycle is transported on a passenger car in the rain or similar poor weather conditions, it will be exposed to a great amount of water, regardless of the speed of travel and intensity of the rain. Protect electric parts and moving parts (cables, gearshift levers, chain) in particular using some sort of rain-proof cover. It is also a very good idea to protect the saddle in such cases by wrapping it in plastic.

The bicycle should not be stood “upside down” during transport, i.e., attached to the roof of the vehicle by its handlebars, because the handlebars could be subject to high dynamic force, which could lead to material fatigue in specific cases and subsequently to destruction of this material. It is not permitted to transport e-bikes on the roof of a car due to their increased weight (motor, battery). Recommended methods of transport are on an e-bike carrier which is attached at the rear of the vehicle to the tow-bar.

Remove all parts that can be easily lost or removed, or stolen (i.e., pumps, bottles, bags, lights, etc.). Adapt the speed of the vehicle to the relevant conditions (great sensitivity to side wind) and pay attention to passing under lowered profiles, such as tunnels, underpasses and garages.

**WARNING:**

Pay attention to the maximum weight of e-bike carriers. E-bikes weigh more than normal bikes.

### STORAGE OF THE E-BIKE

If you will be storing the e-bike for an extended period (e.g., over winter), follow the instructions below:

1. Before storage, clean the e-bike properly and lubricate the appropriate parts (particularly the chain, chainset, derailleurs and rims).
2. Treat chrome parts and parts with a glossy surface with a product protecting against corrosion.
3. Check the tyre pressure, adjust it to the prescribed pressure.
4. Charge the battery. Don't leave the charger connected to the mains or to the battery when charging is complete. If stored for an extended period the battery should be regularly charged every two months.
5. The battery and the charger should be stored in a dry and well-ventilated area at an ambient temperature of 0 - 35°C and a relative humidity of up to 65%. Avoid leaving these devices near corrosive substances and make sure that they are at a safe distance from excessive heat and open fire.
6. Protect the e-bike against the weather, particularly the sun, rain and snow.
7. Store the e-bike in a dry and dark room and protect it against dust.

### DISPOSAL OF THE E-BIKE AT THE END OF ITS SERVICE LIFE



**Protect the environment!** Electrical devices and batteries must not be disposed of in communal waste. This product and its batteries contains electric/electronic components. According to European Guideline No. 2012/19/EU, electric and electronic devices and batteries must not be disposed of in communal waste when they reach the end of their service life, but must be taken to specified collection sites for ecological disposal. You can obtain information about these sites from the municipal authority.

# LOCALISATION OF MALFUNCTIONS

Only carry out repair work if you are certain you have the necessary knowledge and the necessary tools to carry out the required servicing. If the cause of the malfunction is not clear and its repeated occurrence cannot be precluded, you should contact a specialised MTF brand retailer.

Some of the basic and most common types of malfunction and how to remove them are as follows:

Problem	Possible cause	Repair measures
The wheels turn with noticeable resistance.	The tyre pressure is too low and there may be a tyre defect (puncture).	Inflate the tyres so that you cannot use your thumb to compress them. If the tyre is damaged, replace it.
	Tyres or bicycle components are in contact with the fork or rear frame assembly, brakes or mudguards.	If the wheel is not centred in the fork (assembly) centre it. Centre the brakes and adjust them if necessary.
	Increased resistance in the wheel hubs.	Adjust wheel bearing play or clean and lubricate.
The pedals only move with difficulty.	The chain, chainset, sprockets or gears are not lubricated sufficiently.	Clean and lubricate the relevant components.
	The pedal bearings or the bottom bracket are not sufficiently lubricated or are damaged.	Replace and lubricate and adjust the pedal bearings. If necessary, replace.
The pedal strokes are uneven.	The crank or pedal is probably loose.	Tighten the crank or pedal.
	The hub is incorrectly adjusted.	Adjust properly and tighten, replace if necessary.
	The crank, chainset or pedal axle has been bent.	Replace.
The chain jumps out (falls) of the chainset cogs or sprocket cogs.	The front or rear derailleur is incorrectly adjusted.	Adjust the limits on the front or rear derailleur.
The gears don't work correctly, the chain jumps over the sprockets.	The gear shift lever is loose or damaged.	Adjust the gear shift lever or replace it.
	The securing or guiding element for the gear cable is loose.	Tighten the guide screws, if necessary replace the cable.
	The front or rear derailleur is not correctly adjusted	Adjust the front or rear derailleur
	The chain length (spacing between individual elements) has been extended past the limit value as a result of wear.	Replace the chain.
	The chain is damaged or not lubricated.	Replace the chain or clean and lubricate.

Problem	Possible cause	Repair measures
The brakes do not work correctly.	The rim, brake discs, shoes or pads are dirty or greasy.	Clean the rims and other parts of the brake system.
	The brake is incorrectly adjusted (the arms are too far apart).	Perform adjustment using the brake regulating elements.
	The brake cable does not move correctly.	Check attachment of the cable and the condition of the Bowdens, or replace damaged cables or Bowdens.
	The brake shoes or pads are worn.	Replace the brake shoes or pads, only use a type correspond to the used brakes.
The brakes make a noise.	The brake shoes are incorrectly adjusted.	Check adjustment of the brake shoes.
	The brake securing element is loose.	Tighten the screws and adjust the brakes.
	The brake shoes or pads are worn.	Replace the brake shoes or pads, only use the correct type.
	The rim, brake discs, shoes or pads are dirty or greasy.	Clean the rims and other parts of the brake system.
There is no charge in the battery.	The battery is not switched on.	Switch the battery on.
	The battery is discharged.	Charge the battery.
	The output cable is not connected to the battery.	Connect the cable from the battery according to the instructions.
The charger LED indicator does not come on.	Incorrectly connected to the mains.	Check the socket and proper connection of the power supply cable to the charger and to the mains socket.
	Defective charger.	Replace the charger.
Battery not charging.	Bad contact between the charger output connector and the battery.	Check the output connector from the charger to make sure it is correctly connected to the battery.
	Battery overcharge mechanism active.	The battery can be used as normal.
	Charger is damaged.	Replace the charger.
	Battery elements are defective.	Replace the battery.
The LED indicator remains red even after long periods of charging.	Defective battery.	Have the battery tested.

Problem	Possible cause	Repair measures
The bicycle's range is short even though the battery is full charged.	Tyres underinflated.	Make sure that the tyre pressure is correct.
	Outdoor temperatures are below freezing.	Limit use of motor assistance.
	Strong head wind, excessive stress on the motor due to steep incline.	Limit use of motor assistance.
	The battery may be too old.	Replace battery.
The motor does not respond, even when the system is switched on.	Defective battery cable.	Have the electrical wiring tested.
	The switch on the brake lever is not functioning.	Check the cable contacts and switch function.
The bicycle does not respond to the LCD panel settings. The motor does not operate at full performance.	The battery is probably not charged sufficiently.	Charge the battery.
	The performance regulator is defective, or the contact between the battery and the motor may be interrupted.	Have the electrical wiring tested.

Please contact your retailer if you have any questions or other difficulties.

# E-BIKE WARRANTY

## Warranty conditions

The MTF retailer will repair all defects caused by defective material, execution, design or assembly which occur during the warranty period at its own expense. The warranty does not apply to damage caused by accidents, overloading the frame or wheels, incorrect use, operation or maintenance, incorrect storage or unprofessional repairs.

## Claims procedure

Always apply a claim against the e-bike or battery through your retailer.

During application of the claim, submit the purchase document, or the warranty certificate with the serial number of the frame or battery filled in, and give the reason for the claim and a precise description of the defect.

## Warranty period

**24 months for e-bike components.** This applies to manufacturing defects and material defects, apart from normal wear and use.

**6 months for the battery service life.** The nominal capacity of the battery will not fall below 70% of total capacity over a period of 6 months from sale of the e-bike.

## General terms of use

Every user of the bicycle is liable for any damage or harm caused by incorrect use of the bicycle and its components. Before riding the bicycle always carefully check the frame and all its components.

## Warranty terms

This product must be used exclusively for the purpose for which it was manufactured and for which it is intended. When applying the warranty, the customer will present the complete, clean bike, the confirmed original of the warranty certificate and the sales document (receipt).

Claims are always of the nature of a removable defect, which is dealt with by replacement of the component, repairs or professional adjustment. Repairs ensure that the customer may continue using the product duly and without restriction.

The right to apply the warranty expires if:

- It was found that the damage to the product was not caused by the manufacturer, but the user (inappropriate repairs, extreme load, incorrect storage, etc.).
- Failure to apply a warranty claim during the warranty period.
- If the product was not duly used and maintained in compliance with the instructions for use.
- If a duly completed warranty certificate and original purchase document (receipt) was not submitted during application of the claim.
- Defects originating as a result of normal wear (e.g., of the chain or rims) or excessive wear caused by neglecting inspections and maintenance cannot be the subject of a claim.

## Warranty terms for individual parts of the e-bike

The warranty for components does not apply to defects caused by the user, failure to follow the instructions for use, normal wear, use for purposes for which neither the frame nor the components are intended (professional racing, extreme jumping and other non-standard use). Neither the manufacturer nor the retailer are liable for any injury caused during use of e-bikes and their components.

### Frame and fork

The warranty applies to material, joints and rusting. The warranty cannot be applied for damage caused by accidents or unprofessional repairs. The original paint on the specific component must be retained in order to assess the cause of damage.

### Suspension fork and rear suspension unit

A key criterion for accepting claims regarding a cracked suspension fork is that the geometry of the internal and external pistons of the fork is intact. Defects of the nature of origin of play cannot be claimed if there is dirt or water in the fork, which causes damage, and also bent fork pistons or damaged heads as a result of accidents or overloading.

Defects during which the geometry of the unit is damaged (accident or overloading or inappropriate adjustment), or if there is evident leakage of air or oil caused by penetration of dirt and water under the seal, there are clear grooves or traces of corrosion on the sliding parts, cannot be acknowledged in relation to the rear suspension.

### **Steering**

The warranty applies to material defects, deformation of the fork arms is not recognised if the stem is tightened excessively or the stem is deformed after being extended above the mark for maximum permissible extension. Operation of the bicycle requires control and adjustment of play in the headset, which is why knocked out, corroded or dirty bearing tracks cannot be acknowledged as a justified claim.

### **Bottom bracket**

Defects of the material and its thermal processing are included in the warranty. Normal adjustment of play is not covered by warranty. It is also not possible to recognise deformed or stripped threads of components and damaged crank arm torx sockets. Stripped bearing races and corroded parts are not covered by warranty. Please regularly check the condition of the bottom bracket and react appropriately to any potential origin of noticeable play immediately.

### **Pedals**

The warranty applies to provable material defects. Wear as a result of use, loosening or cracking of frame joints or bending of pins caused by impact are not a reason to recognise a claim. Generation of sound and adjustment of play are not covered by warranty, but post-warranty servicing. Be careful of the moving parts of pedals becoming loose, check that these are correctly tightened. The warranty does not apply to loss of loose parts.

### **Wheels**

The warranty covers material defects (cracked rim, hub, sprocket, axle) including defects of surface treatment. A key criterion for accepting a warranty claim on the basis of operating play and noise generated by the running of the sprocket is functionality. Stripped bearing races, penetration of dirt into the freewheel element and hub bearings and corroded parts are not covered by warranty.

### **Brakes, gear shift mechanism, front and rear derailleurs**

The warranty covers material defects. The warranty does not apply to adjustment. Adjustment may change as a result of storage, manipulation and cycling and repeated adjustment is part of normal bicycle maintenance. Shifting gears, particularly using the front derailleur levers, requires some sensitivity. The warranty cannot be applied to potential stripping of the mechanism as a result of use of inappropriate force.

### **Saddle, seat post**

The warranty covers material defects and the defect is assessed from the aspect of impact on function. A claim cannot be applied on the basis of grooves caused by moving the seat post in the saddle tube. Claims on the basis of the seat post are not recognised if it was extended past the mark of maximum permissible extension. Claims also cannot be applied against bent seat posts as a result of accident or overloading when jumping, bending of the saddle rails, damage to the cable guide of telescopic seat posts in the saddle tube, torn saddle covers, etc.

### **Chain**

The warranty covers material defects (e.g., broken links). The warranty does not apply to wear as a result of normal use. The warranty does not apply to broken chains as a result of insensitive gear shifting (disconnection at the pin), deformation as a result of operation (overturning), operating wear (chain stretch, so-called maximum permissible spacing between the links) and if maintenance is neglected (corrosion, jamming due to dirt, etc.).

### **Reflectors, chainset cover, spoke cover**

The warranty applies to material defects. Fractured or broken parts are not covered by warranty.

### **Disc and hydraulic brakes**

The warranty applies to manufacturing and material defects. The warranty cannot be applied to damage caused by accidents, neglected maintenance or unprofessional repairs. In the case of hydraulic brakes, always use hydraulic brake fluid recommended by the manufacturer. The properties of brake fluid differ so much that use of incorrect fluid can cause serious damage to the entire brake system.



*[The page contains horizontal dotted lines for writing.]*

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We wish you many happy kilometers (miles) riding your new e-bike!

Your MOUNTFIELD team

The logo consists of the letters 'MTF' in a bold, italicized, sans-serif font. The letters are white and are set against a solid red rectangular background.

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