

MERIDA

Translation of the original operating instructions

MOUNTAIN BIKE EN 14766
PEDELEC, E-BIKE, EPAC EN 15194

Read at least pages 12-19 before your first ride!
Perform the functional check on pages 20-22 before every ride!
Observe the chapter "Intended use",
the service schedule, the bike card and the handover report!



Component description MERIDA mountain bike



Frame:

- 1 Top tube
- 2 Seat tube
- 3 Down tube
- 4 Chainstay
- 5 Rear stay
- 6 Head tube
- 7 Rear shock

Suspension fork:

- I Fork crown
- II Stanchion tube
- III Lower leg
- IV Drop-out



Component description MERIDA mountain bike



Frame:

- ① Top tube
- ② Seat tube
- ③ Down tube
- ④ Chainstay
- ⑤ Rear stay
- ⑥ Head tube
- ⑦ Rear shock

Suspension fork:

- I Fork crown
- II Stanchion tube
- III Lower leg
- IV Drop-out



Wheel:

- Quick-release/ thru axle
- Rim
- Tire
- Spoke
- Hub
- Valve

Component description MERIDA pedelec



Frame:

- 1 Top tube
- 2 Seat tube
- 3 Down tube
- 4 Chainstay
- 5 Rear stay
- 6 Head tube

- a Motor
- b Rechargeable battery
- c Display and command console

Suspension fork:

- I Fork crown
- II Stanchion tube
- III Lower leg
- IV Drop-out



Translation of the original MERIDA operating instructions

The translation of these original MERIDA operating instructions includes the following bicycle types:

Mountain bikes
Pedelec
Speed pedelec
E-bike
EPAC



It is essential to also observe the instructions of the component manufacturers on this MERIDA CD-ROM. These operating instructions are subject to European law. If delivered to countries outside Europe, supplementary information has to be provided by the manufacturer of the MERIDA bike, if necessary.



Always keep yourself informed at www.merida-bikes.com

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Technical details in the text and illustrations of this manual are subject to change.

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Some notes on the translation of these original MERIDA operating instructions

The illustrations on the first pages of the translation of these original MERIDA operating instructions show a typical MERIDA mountain bike and a typical MERIDA pedelec. One of these MERIDA bikes looks similar to the MERIDA mountain bike or MERIDA pedelec you have purchased. Today's bikes and pedelecs come in various types that are designed for specific uses and fitted accordingly. The translation of these original MERIDA operating instructions includes the following bicycle types:

Mountain bikes (cross **(a)**, cross-country **(b)**, marathon **(c)** and tour mountain bikes, enduro and all mountain bikes, dirt and freeride bikes)

Pedelecs **(d)** and speed pedelecs (EPAC)

In the translation of these original MERIDA operating instructions pedelecs with drive support and described as EPACs in the European standard EN 15194 are referred to as pedelecs. For a precise description of the different EPAC types see the chapter "Intended use".

In the translation of these original MERIDA operating instructions the term "bike" will always be used in general descriptions if this refers to mountain bikes and pedelecs.



Pay particular attention to the following symbols:



This symbol indicates an imminent risk to your life or health unless you comply with the instructions given or take preventive measures.



This symbol warns you of wrongdoings which may result in damage to property and the environment.



This symbol provides you with information about how to handle the product or refers to a passage in the operating instructions that deserves your special attention.

The following symbols always appear if it is necessary to bring your attention to special points concerning pedelecs. If you have purchased a MERIDA pedelec then you should pay special attention to this information and these warnings. Please note as well in all cases the general warning information given in the translation of these original operating instructions.



This symbol indicates an imminent risk to your life or health unless you comply with the corresponding handling instructions given or take preventive measures when using your MERIDA pedelec. Please note as well in all cases the general warning information given in the translation of these original operating instructions.



This symbol warns you of incorrect actions that could result in damage to property and the environment when using your MERIDA pedelec. Please note as well in all cases the general warning information given in the translation of these original operating instructions.



This symbol provides you with information about how to handle the MERIDA pedelec or refers to a passage in the translation of these original operating instructions that deserves your special attention. Please note as well in all cases the general warning information given in the translation of these original operating instructions.

The described possible consequences will not be repeated in the translation of these original MERIDA operating instructions every time one of the symbols appears.

These operating instructions are not intended to help you assemble a MERIDA mountain bike or a MERIDA pedelec from individual components, to repair it or to make a partly assembled MERIDA mountain bike or MERIDA pedelec ready-for-use. **The translation of these original MERIDA operating instructions is not applicable to any other than the displayed bike or pedelec types.**

The translation of these original MERIDA operating instructions together with this MERIDA CD-ROM complies with the requirements of the European standards EN 14766 for mountain-bicycles and EN 15194 for pedelecs. Also observe the system instructions of the drive manufacturers and the instructions of the component manufacturers, which you can find on this MERIDA CD-ROM.



e



f



g



h

General safety instructions

Dear MERIDA customer,

In purchasing this MERIDA bike (e+f) you have chosen a product of high quality. Each component of your new MERIDA bike has been designed, manufactured and assembled with great care and expertise. Your MERIDA dealer gave the bike its final assembly and made a functional check. This guarantees you pleasure and a sense of confidence from the very first turn of the pedals.

This manual contains a wealth of information on the proper use of your MERIDA bike, its maintenance and operation as well as interesting information on bike and pedelec design and engineering. Read the translation of these original MERIDA operating instructions thoroughly. We are sure that even if you have been cycling all your life you will find useful and detailed information. Bike technology has developed at a rapid pace during recent years (g+h).

Therefore, before setting off on your new MERIDA bike, be sure to read at least the chapter "Before your first ride".

To ensure as much fun and safety as possible during cycling, be sure to carry out the functional check described in the chapter "Before every ride" before setting off on your MERIDA bike.

Even a manual as big as an encyclopedia could not describe any possible combination of bike or pedelec models and components or parts on the market. The translation of these original MERIDA operating instructions therefore focuses on your newly purchased MERIDA mountain bike and MERIDA pedelec and standard components and provides the most important information and warnings. In addition to this, the system instructions of your drive manufacturer give important information and warnings on handling your new MERIDA bike.

When doing any adjusting and maintenance work, be aware that the detailed instructions provided in your manual only refer to this MERIDA bike.

The information included here is not applicable to any other bike or pedelec type. As bikes come in a wide variety of designs with frequent model changes, the routines described may require complementary information. It is essential to also observe the system instructions of your drive manufacturer as well as the instructions of the component manufacturers on this MERIDA CD-ROM.

Be aware that these instructions may require further explanation, depending on the experience and/or skills of the person doing the work. For some jobs you may require additional (special) tools or supplementary instructions. This manual cannot teach you the skills of a bicycle mechanic.



This MERIDA CD-ROM includes the system instructions of your drive manufacturer, the instructions of the component manufacturers as well as the relevant web links.

Before you set off, let us point out a few things to you that are very important to every cyclist. Never ride without a properly adjusted helmet and without glasses **(a)**. Make sure to wear suitable, bright clothing, as a minimum you should wear straight cut trousers and or leg bands and shoes fitting the pedal system **(b)**. Always ride carefully on public roads and observe the traffic rules so as not to endanger yourself or others.

This manual cannot teach you how to ride. Please be aware that cycling is a potentially dangerous activity that requires the rider to stay in control of his or her MERIDA bike at all times. Be aware from the moment you set off that you ride at a higher speed **(c+d)**. If necessary, attend a beginners course for cyclists, as offered here and there.

Like any sport, cycling involves the risk of injury and damage. By choosing to ride a bike, you assume the responsibility for the risk. Please note that on a bike you have no protection technique around you like you have in a car (e.g. bodywork, ABS, airbag). Therefore, always ride carefully and respect the other traffic participants.

Never ride under the influence of drugs, medication, alcohol or when you are tired. Do not ride with a second person on your MERIDA bike (except on a tandem) and never ride without having both hands on the handlebars.

Observe the legal regulations concerning off-road cycling (e+f) and cycling on public roads with MERIDA bikes and MERIDA pedelecs. These regulations may differ in each country. Respect nature when riding through the forest and in the open countryside. Only use your pedelec on signposted, well maintained trails and hard-surface roads.

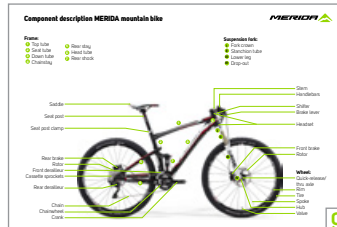
Always bear in mind that you travel rapidly and quietly when you are riding a MERIDA pedelec. Do not startle pedestrians or other cyclists. Always make others aware of your presence well ahead of time and by ringing your bell or make use of the brakes so as to avoid accidents. Familiarize yourself with your MERIDA pedelec. For more information in this regard, read the chapters "Riding a MERIDA pedelec – Special features" and "Riding a MERIDA speed pedelec – Special features".



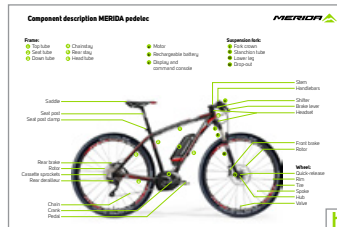
e



f



g



h

First we would like to familiarize you with the various components used on your MERIDA mountain bike and on your MERIDA pedelec. Observe the component description on the front pages of the translation of these original MERIDA operating instructions (g+h). Here you will find two MERIDA mountain bikes and on MERIDA pedelec showing all the essential components so that you can easily locate the components as they are referred to in the text.



For your own safety, never do any work or adjusting when servicing your bike unless you feel absolutely sure about it. If you are in doubt or if you have any questions, contact your MERIDA dealer.



Please note: Do not hitch yourself and your bike to a car. Do not ride freehand. Only take your feet off the pedals, if required by the condition of the road.

MERIDA – MORE BIKE!

Intended use

Keep in mind that every type of bike is designed for a specific use. Be sure to use your MERIDA bike and your MERIDA pedelec only according to its intended use, as it may otherwise not withstand the stress and could fail and cause an accident with unforeseeable consequences! If you use your bike for another than its intended purpose, the warranty will become void.

Category 2: Cross bikes

MERIDA cross bikes (a) have 28"-wheels (inner diameter 622 mm) and are intended for hard-surface roads, i.e. for tarred roads and cycle lanes or gravel field tracks. They are, however, not suitable for use on rough terrain.

Category 2: MERIDA bikes of this category are designed for riding on hard-surface roads where the wheels remain in permanent contact to the ground and for well paved gravel paths and off-road trails with a slight slope where a short loss of tire contact with the ground due to small steps can occur. This condition comprises MERIDA cross bikes as well as MERIDA cyclo-cross bikes with road racing handlebars and cantilever or disc brakes.

Categories 3-5: Mountain bikes

The **mountain bike** itself describing one particular type of bike does not exist any longer. Various types of mountain bikes for specific uses have been developed instead. Be sure to use your MERIDA bike only according to its intended use. Observe the traffic rules when riding on public roads. The rider's maximum weight incl. baggage and bike should not exceed **135 kg**.



MERIDA bikes of the categories 0, 1, 2 and 3 are not suitable for stair riding, jumps, slides, stoppies, wheelies, tricks etc.!

Category 3: Cross-country, marathon and tour mountain bikes

MERIDA cross-country (b), **MERIDA marathon** and **MERIDA tour mountain bikes (c)** are also suitable for off-road use, but not for tricks, stair riding etc., training and competitive use in the categories freeride, dirt, downhill races.

Category 3: MERIDA bikes of this category comprise the MERIDA bikes of the categories 1 and 2 and are in addition suitable for rough and unpaved terrains. Sporadic jumps are also included in the field of use of these MERIDA bikes. But particularly inexperienced riders doing jumps may land inappropriately, thus increasing the acting forces significantly which may result in damage and injuries. This category is typically represented by MERIDA mountain bike hardtails and full suspension MERIDA bikes with short suspension travel.

Category 4: Enduro and all mountain bikes

MERIDA enduro (e) and **MERIDA all mountain bikes (f)** are suitable for off-road use (Alpcross etc.), but not for tricks, stair riding etc., training and competitive use in the categories freeride, dirt, downhill races.

Category 4: This category includes MERIDA bikes of the categories 1 to 3. In addition, bikes of this category are suitable for very rough and partly blocked terrain with steep slopes and higher speeds as a result thereof. Regular jumps by experienced riders are no problem for these MERIDA bikes. The regular and durable use of the MERIDA bikes in bike parks must, however, be excluded.

Due to the higher stresses, these MERIDA bikes should be checked for possible damage after every ride. Full suspension MERIDA bikes with medium suspension travel are typical for this category.

Category 5: Dirt and freeride bikes

MERIDA dirt bikes (g) are intended for harder use on secured terrain. There are different types of dirt bikes which are either designed for tricks and show rides, jumps and freestyle in special obstacle parks, whereas others are intended for races.

MERIDA freeride bikes (h) are suitable for jumps and drops in most challenging terrains and in bike parks.

Category 5: This type of use stands for very challenging, highly blocked and extremely steep terrains, which can only be mastered by well-trained riders with technical skills. Rather high jumps at very high speeds as well as the intensive use of specific, identified bike parks or downhill trails are typical for this category. In the case of these MERIDA bikes it must be considered that a thorough check for possible damage is carried out after every ride. Preliminary damage with clearly inferior further stress can result in failure. A regular replacement of safety-relevant components must also be taken into account. Wearing special protectors is strongly recommended. Full suspension MERIDA bikes with long suspension travels are typical for this category.



For your own safety, do not overestimate your riding skills. Please note that though looking easy the tricks of a professional are hazardous to your life and limb. Always protect yourself with suitable clothing.



Trailers attached to the chain and rear stays are not permitted for MERIDA full-suspension bikes. Trailers attached to the rear wheel axles are, however, permitted.



Due to their design and fittings MERIDA mountain bikes (cross, cross-country, marathon and tour bikes, enduro and all mountain bikes, dirt and freeride bikes) are not suitable for being used on public roads. If you want to use them on public roads, these bikes must be fitted with the prescribed equipment. Observe the traffic rules when riding on public roads. For more information see the chapter "Legal requirements for riding on public roads".

Pedelecs

Pedelecs (pedal electric cycles) or EPACs (Electrically Power Assisted Cycles) are bicycles with an auxiliary motor that only switches on when you move the pedals. When you stop pedaling, the motor switches off.

A driving license is not required for riding a MERIDA pedelec, if the motor assistance switches off automatically at a speed of 25 kmh. You do not need an operating license and need not insure the pedelec either.

In general, all regulations that apply to bicycles also apply to MERIDA pedelecs (a-c). Inform yourself in the country where you use your MERIDA pedelec whether wearing a helmet is compulsory (d). Please note that wearing a helmet is compulsory in Australia.

Please make sure you do not confuse your MERIDA pedelec with a "MERIDA speed pedelec" (see "Speed pedelecs").

Most MERIDA pedelecs are designed for cycling exclusively on lanes and roads with a smooth surface. Only use trails that are allowed for bicycles. For off-road use only MERIDA off-road pedelecs are suitable. Using MERIDA trekking pedelecs off-road can result in crashes with unforeseeable consequences.

Some MERIDA pedelecs have a pushing aid which provides assistance during pushing, even without pedaling, up to a speed of 6 km/h.

Your MERIDA pedelec is designed for a maximum overall weight including rider, baggage and MERIDA pedelec. The overall weight is **140 kg**.

Speed pedelecs

Speed pedelecs are bicycles with auxiliary motor which provide assistance to the rider even beyond a speed of 25 km/h, as long as you continue pedaling. Without pedaling a MERIDA speed pedelec provides assistance to a maximum speed of 20 km/h.



MERIDA speed pedelecs are regarded as motor vehicles, have an operating license or EU type approval, and are therefore subject to strict regulations relating to the replacement of components and to changes.

Please check in the country where you use your MERIDA speed pedelec whether you require a moped license or a driving license for motor vehicles. You can obtain a moped license if you are aged 15 or over. Inform yourself at your driving license agency.



Make yourself familiar with the rules and regulations with regard to speed pedelecs in the country where you use your MERIDA speed pedelec.

Inform yourself in the country where you use your MERIDA speed pedelec about the regulations on the use of speed pedelecs on cycle lanes in built-up areas, on lanes which are marked with a road sign allowing access for mopeds, on cycling one-way streets in the opposite direction, even when they are allowed to bikes and on the use of roads which are closed for motor vehicles, motor cycles and mopeds.

When riding a MERIDA speed pedelec wearing a helmet is compulsory. A standard cycling helmet will do. Also read the chapter "Riding a MERIDA speed pedelec – Special features".

Most of the MERIDA speed pedelecs **(e)** are designed for cycling exclusively on lanes and roads with a smooth surface **(f)**. Only use trails that are allowed for speed pedelecs / e-bikes. Typical MERIDA speed pedelecs are generally not suitable for off-road use. Using MERIDA speed pedelecs off-road can result in crashes with unforeseeable consequences.

Your MERIDA speed pedelec is designed for a maximum overall weight including rider, baggage and MERIDA speed pedelec. The overall weight is **140 kg**.



accident!

Be sure to use your MERIDA bike only for its intended purpose, as it may otherwise not withstand the stress and fail. Risk of an



Please note that there are different types of pedelecs and e-bikes which are subject to different legal framework conditions. Check the class of your MERIDA pedelec or MERIDA e-bike in the bike card **(g)**. Keep the specific regulations in mind when riding on public roads and through the landscape.



The regulations and rules for pedelecs and speed pedelecs are being revised permanently. Read the daily press to keep you informed about current legislative changes.



e



f

Bike card		Intended use	
Manufacturer		<input type="checkbox"/> Category 1	<input type="checkbox"/> Category 2
Model		<input type="checkbox"/> Category 3	<input type="checkbox"/> Category 4
Region		<input type="checkbox"/> Category 5	
Class	Not indicated class	Permitted overall weight MERIDA bike and pedelec/baggage _____ kg Rider and gear _____ kg Permitted overall load _____ kg Child seat permitted _____ kg Trailer permitted _____ kg Child carrier permitted _____ kg	
Class light		Bike load Bike equipment Right hand <input type="checkbox"/> Foot pedal brake Left hand <input type="checkbox"/> Rear wheel brake Hub <input type="checkbox"/> Disc wheel brake Motor <input type="checkbox"/> Disc wheel brake	
Weight (incl.)		Need to attach "Motor you are not up" in the translation of your country (EMEA) operating instructions. Yes <input type="checkbox"/> No <input type="checkbox"/>	
Approved for road		Special features Safety and operation of the MERIDA device _____ Other _____	
Electric type			
Power type			
Max. system battery			
Special features			

g



h



It is essential to also observe the system instructions of your drive manufacturer as well as the instructions of the component manufacturers on this MERIDA CD-ROM.



For more information about the intended use of your MERIDA pedelec or MERIDA speed pedelec as well as the permitted overall weight (rider, MERIDA pedelec and baggage) see the bike card and the chapter "Before your first ride".



For more information on the approval of using trailers **(h)** and child carriers on your MERIDA pedelec, have a look at the bike card.



Keep the translation of these original MERIDA operating instructions for future reference and hand it over to the respective user, in case you sell, lend or pass on the MERIDA pedelec or MERIDA speed pedelec otherwise.



For more information about the intended use of your MERIDA bike and the permitted overall weight (rider, MERIDA bike and baggage) see the bike card and chapter "Before your first ride".

Before your first ride

1. If you want to use your bike on public roads, it has to comply with legal requirements. These requirements may vary in each country. The fittings of your MERIDA bike are, therefore, not necessarily complete **(a)**. Ask your MERIDA dealer concerning the laws and regulations applicable in your country or in the country you intend to use your MERIDA bike. Have your MERIDA bike equipped accordingly before using it on public roads.

For more information see the chapter “Legal requirements for riding on public roads”.

2. Are you familiar with the brake system **(b)**? Have a look at the bike card and check whether the brake lever of the front brake is on the side you are used to (right or left). If it is not, ask your MERIDA dealer to switch the brake levers before you set off for the first time.

Your new bike is equipped with modern brakes which may be far more powerful than those you were used to so far. Be sure to first practice using the brakes on a level, non-slip surface off public roads! Slowly approach higher brake performances and speeds.

For more information see the chapter “The brake system” and the instructions of the component manufacturers on this MERIDA CD-ROM.



a



b



c



d

3. Are you familiar with the type and functioning of the gears **(c)**? Ask your MERIDA dealer to explain you the gear system and make yourself familiar with your new gears in an area free of traffic, if necessary.

For more information see the chapter “The gears” and the instructions of the component manufacturers on this MERIDA CD-ROM.

4. Are saddle and handlebars properly adjusted? The saddle should be set to a height from which you can just reach the pedal in its lowest position with your heel **(d)**. Check whether your toes reach to the floor when you are sitting on the saddle. Your MERIDA dealer will be pleased to help you, if you are not happy with your seating position.

For more information see the chapter “Adjusting the MERIDA bike to the rider”.

5. If your MERIDA bike is equipped with clipless or step-in pedals **(e)**: Have you ever tried the shoes they go with? First practice locking one shoe onto a pedal and disengaging it while standing on the other leg. Ask your MERIDA dealer to explain you the pedals.

For more information see the chapter “The pedals and the shoes” and the instructions of the component manufacturers on this MERIDA CD-ROM.

6. If you have bought a MERIDA bike with suspension **(f+g)**, you should ask your MERIDA dealer to adjust the suspension mechanism to your needs before delivery. Improperly adjusted suspension components are liable to malfunction or damage. In any case they will impair the performance of your pedelec as well as your safety and joy whilst riding.

For more information see the chapters "Suspension forks" and "Rear shocks" and the instructions of the component manufacturers on this MERIDA CD-ROM.



Be aware that the distance you need to stop your pedelec increases, when you are riding with your hands on bar ends or on multi-position handlebars. The brake levers are not always within easy reach.



A lack of practice when using clipless pedals or too much spring tension in the mechanism can lead to a very firm connection, from which you cannot quickly step out! Risk of an accident!



Pay particular attention to the fact that there is enough clearance between your crotch and the top tube so that you do not hurt yourself when you have to get off your bike quickly.



Note that both braking effect and tire grip can be reduced drastically in wet conditions. Look well ahead when riding on wet roads and go well below the speed you would ride at in dry conditions.



accident!

Be sure to use your MERIDA bike only for its intended purpose, as it may otherwise not withstand the stress and fail. Risk of an accident!



Due to the specific intended use, some MERIDA dirt bikes **(h)** are fitted with only one brake. There is, however, always a second brake supplied which can be mounted, if necessary. Do not ride these MERIDA bikes on public roads, but only on enclosed terrain.



In case you had a crash with your MERIDA bike, perform at least the check described in the chapter "Before every ride". Ride back very carefully by taking the shortest route possible, even if your MERIDA bike went through this check without any problems. Do not accelerate or brake hard and do not ride your bike out of the saddle. If you are in doubt, have yourself picked up by car, instead of taking any risk. Back home you need to check your MERIDA bike thoroughly once again. If you are in doubt or if you have any questions, contact your MERIDA dealer!



Before towing a trailer with your MERIDA mountain bike contact your MERIDA dealer.



Before mounting a child seat, have a look at the bike card and contact your MERIDA dealer.

Additional information “Before your first ride” with your MERIDA pedelec

1. Have you ridden a pedelec yet? Please note the particular riding characteristics of this revolutionary hybrid drive concept. Set off for your first ride by selecting the lowest level of drive assistance (a)! Slowly approach the potential of your MERIDA pedelec in an area free of traffic.

For more information see chapters “Riding a MERIDA pedelec – Special features” or “Riding a MERIDA speed pedelec – Special features” and the system instructions of your drive manufacturer on this MERIDA CD-ROM.

2. The rechargeable battery of your MERIDA pedelec must be charged before you set off for the first time (b). Are you familiar with the handling and mounting of the rechargeable battery? Before you set off for the first time, check whether the battery is properly mounted, that it has engaged audibly and that it is locked.

For more information see the system instructions of your drive manufacturer on this MERIDA CD-ROM.



3. The functions of your MERIDA pedelec are operated with the buttons on the drive HMI (c) or on the command console (d). Are you familiar with all functions and displays? Check whether you know the functions of all buttons on the drive HMI or on the command console.

For more information see the system instructions of your drive manufacturer on this MERIDA CD-ROM.

4. Your MERIDA pedelec has a pushing aid. The pushing aid provides assistance during pushing your MERIDA pedelec. Are you familiar with the pushing aid?

For more information see the system instructions of your drive manufacturer on this MERIDA CD-ROM.



Be sure to use your MERIDA pedelec only for its intended purpose, as it may otherwise not withstand the stress and fail. Risk of an accident!



When mounting your MERIDA pedelec, make sure not to step on the pedals until you sit in the saddle and grip the handlebars tightly, and that one pedal is at the lowest position when you get on. The motor assistance might switch on suddenly and result in an uncontrolled start of your MERIDA pedelec. Risk of an accident!



Pulling the brake lever of the rear brake stops the motor. Emergency stop!



We recommend that you charge your battery only during the day and only in dry rooms which have a smoke or a fire detector; but not in your bedroom. Place the battery during the charging process on a big, non-inflammable plate made of ceramics or glass (e)! Unplug the battery once it has been charged up.



Charge your battery only with the supplied charger (f). Do not use the charger of any other manufacturer, not even when the connector of the charger matches your rechargeable battery. The rechargeable battery can heat up, catch fire or even explode!



Do not park your MERIDA pedelec in the blazing sun.



Remove the battery and/or the display before beginning work on your pedelec (e.g. inspection, repair, assembly, maintenance, work on the drive, etc.). In case of unintentional activation of the drive system there is the risk of injury!



The weight distribution on your MERIDA pedelec differs markedly from the weight distribution on bikes without drive assistance. A MERIDA pedelec is markedly heavier than a MERIDA bike without drive assistance. For this reason parking, pushing, lifting and carrying the MERIDA pedelec is more difficult. Bear this in mind when loading your pedelec into a car and unloading it or when mounting it on a bicycle carrier system.



Be aware that the brakes of your MERIDA pedelec are always more effective than the drive. If you face any problems with your drive (e.g. because it pushes you forward in front of a bend), slow down your MERIDA pedelec carefully.



Before towing a trailer (g) with your MERIDA pedelec contact your MERIDA dealer.



Before mounting a child seat (h), have a look at the bike card and contact your MERIDA dealer.



Please note that not all MERIDA pedelecs are fitted with kickstands. Therefore, when parking your MERIDA pedelec, make sure it stands safe and secure and is not at risk of toppling over or being knocked over. If your MERIDA pedelec topples over, it can suffer from damage.

Before every ride

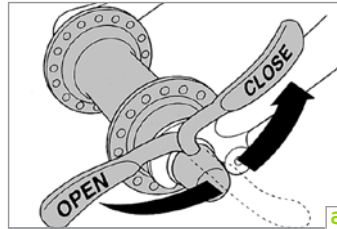
Your MERIDA bike has undergone numerous tests during production and a final check has been carried out by your MERIDA dealer. Nevertheless, be sure to check the following points to exclude any malfunctioning that may be due to the transport of your MERIDA bike or to changes a third person may have performed on your MERIDA bike before delivery:

1. Are the quick-release levers **(a)**, thru-axles or nuts of the front and rear wheel, the seat post and other components properly closed?

For more information see the chapter "How to use quick-releases and thru axles" and the instructions of the component manufacturers on this MERIDA CD-ROM.

2. Are the tires in good condition and do they have sufficient pressure **(b)**? A higher pressure gives a better riding stability and reduces the risk of a puncture. The minimum and maximum pressure (in bar or PSI) is indicated on the tire side.

For more information see the chapter "The wheels and the tires" and the instructions of the component manufacturers on this MERIDA CD-ROM.



3. Spin the wheels to check whether the rims are true. If you have disc brakes, watch the gap between frame and rim or tire and, if you have rim brakes, between brake pad and rim. Untrue rims can be an indication of tires with ruptured sides, broken axles or spokes.

For more information see the chapter "The wheels and the tires" and the instructions of the component manufacturers on this MERIDA CD-ROM.

4. Test the brakes in stationary by firmly pulling the brake levers towards the handlebars **(c)**. The brake pads of rim brakes must hit the rim evenly with their entire surface without touching the tire during braking, in open condition or in between. Make sure you cannot pull the brake levers all the way to the handlebars and check the hydraulic brake cables for leaks! Check the thickness of the brake pads, as well.

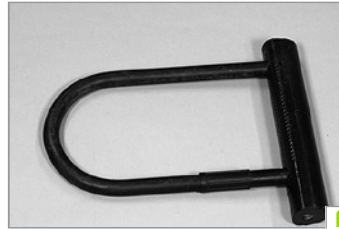
With disc brakes you should have a stable pressure point at once. If you have to actuate the brake lever more than once to get a positive braking response, have the MERIDA bike checked by your MERIDA dealer immediately.

For more information see the chapter "The brake system" and the instructions of the component manufacturers on this MERIDA CD-ROM.

5. Let your MERIDA bike bounce on the ground from a small height. If there is any rattling, see where it comes from. Check the bearings and bolted connections, if necessary. Tighten them slightly, if necessary.
6. In case you have a MERIDA bike with suspension, press down on your MERIDA bike and see whether the spring elements retract and extend as usual **(d)**. For more information see the chapters "Suspension forks" and "Rear shocks" and the instructions of the component manufacturers on this MERIDA CD-ROM.
7. If your bike has a kick-stand, make sure it is fully raised **(e)** before you set off. Risk of an accident!
8. Do not forget to take a high quality D- **(f)** or chain lock with you on your ride. The only way to effectively protect your MERIDA bike against theft is to lock it to an immovable object.
9. If you want to ride on public roads, make sure your MERIDA bike is equipped according to the applicable regulations of your country **(g)**. Riding without lights and reflectors in dark or dim conditions is very dangerous because you will be seen too late or not at all by other road users. A lighting set that corresponds to the regulations is a must on public roads. Turn on the lights as soon as dusk sets in. For more information see the chapter "Legal requirements for riding on public roads".



e



f



g



h



accident!

Improperly closed fastenings, e.g. quick-releases, can cause parts of your MERIDA bike to come loose. This can result in a serious



Be aware that the distance you need to stop your bike increases, when you are riding with your hands on bar ends **(h)** or on multi-position handlebars. The brake levers are not always within easy reach.



Do not use your MERIDA bike, if it fails at one of these points! A defective MERIDA bike can lead to serious accidents! If you are in doubt or if you have any questions, contact your MERIDA dealer.



During use your MERIDA bike is undergoing stress resulting from the surface of the road and from the rider's action. Due to these dynamic loads, the different parts of your bike react with wear and fatigue. Please check your MERIDA bike regularly for wear marks, scratches, deformations, color changes and any indication of cracking. Components which have reached the end of their service life may break without previous warning. Let your MERIDA dealer maintain and service your MERIDA bike regularly. In cases of doubt it is always best to replace components.

Additional information “Before every ride” with your MERIDA pedelec

1. Are the connections of the rechargeable battery, the drive HMI or the command console and the drive **(a)** correctly plugged?

For more information see the system instructions of your drive manufacturer on this MERIDA CD-ROM.

2. Is your battery fully charged? Remember to fully recharge the battery after each longer ride (e.g. less than 50% charged). Modern lithium-ion batteries have no memory effect. However, it does not matter if your MERIDA pedelec is left as it is for a short time (e.g. overnight) when less than 50% charged **(b)**. However, you should not wait until the battery is fully discharged!

For more information see the system instructions of your drive manufacturer on this MERIDA CD-ROM.

3. Do the display on the drive HMI **(c)** and the cycle computer on the handlebars show all the values? Is there any error message or warning on the display? Check the values are correct before every ride. Do not set off on your MERIDA pedelec under any circumstances if the control element shows a warning.



a



b



c



d

For more information see the system instructions of your drive manufacturer on this MERIDA CD-ROM.

4. Is the battery tight in its holder and the lock properly locked up **(d)**? Never set off with a loose and unlocked battery.

For more information see the system instructions of your drive manufacturer on this MERIDA CD-ROM.

5. Are the tires in good condition and do they have sufficient pressure? Please note that a pedelec weighs more and that your usual tire pressure may be insufficient. A higher pressure gives a better riding stability and reduces the risk of a puncture. The minimum and maximum pressure (in bar or PSI) is indicated on the tire side.

For more information see the chapter “The wheels and the tires”.



Do not use your MERIDA pedelec, if it fails on one these points! Riding a defective MERIDA pedelec can result in serious accidents! If you are in doubt or if you have any questions, contact your MERIDA dealer.

After an accident

1. Check whether the wheels are still firmly fixed in the drop-outs (e) and whether the rims are still centered with respect to the frame or fork. Spin the wheels and observe the gap either between brake pads and rim sides or between frame and tire. If you have rim brakes and the width of the gap changes markedly and you have no way to true the rim where you are, you need to open the brakes a little with the special device so that the rim can run between the brake pads without touching them. Please note that in this case the brakes may not act as powerfully as you are used to.

No matter whether you have rim or disc brakes, have the wheels trued by your MERIDA dealer immediately after you are back home.

For more information see the chapters “The brake system”, “How to use quick-releases and thru axles” and “The wheels and the tires” as well as in the instructions of the component manufacturers on this MERIDA CD-ROM.

2. Check that handlebars and stem are neither bent nor broken and that they are level and upright. Make sure the stem is firmly fixed on the fork by trying to turn the handlebars relative to the front wheel (f). Briefly lean on the brake levers to make sure the handlebars are firmly fixed in the stem.



Realign the components, if necessary, and gently tighten the bolts to ensure a reliable clamping of the components (g). The maximum torque values are printed directly on the components or specified in the instructions of the component manufacturers on this MERIDA CD-ROM.

For more information see the chapters “Adjusting the MERIDA bike to the rider” and “The headset” and the instructions of the component manufacturers on this MERIDA CD-ROM.

3. Check whether the chain still runs on the chain-wheels and the sprockets (h). If your MERIDA bike fell over to the chain side, verify the proper functioning of the gears. Ask somebody to lift your MERIDA bike by the saddle and carefully shift through all the gears. Pay particular attention when switching to the small gears, making sure the rear derailleur does not get too close to the spokes as the chain climbs onto the larger sprockets.

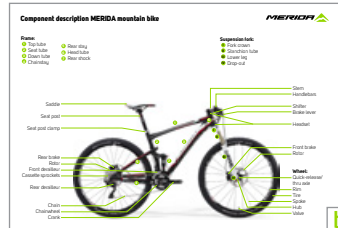
If the rear derailleur or the drop-outs/derailleur hanger is bent, the rear derailleur may collide with the spokes. This in turn can destroy the rear derailleur, the rear wheel or the frame. Check the function of the front derailleur, as a displaced front derailleur can throw off the chain, thus interrupting the drive of your MERIDA bike.

For more information see the chapter “The gears” and the instructions of the component manufacturers on this MERIDA CD-ROM.

4. Make sure the saddle is not twisted by using the top tube or the bottom bracket shell as a reference **(a)**. If necessary, open the clamping, realign the saddle and retighten the clamping.

For more information see the chapters “Adjusting the MERIDA bike to the rider” and “How to use quick-releases and thru axles” and the instructions of the component manufacturers on this MERIDA CD-ROM.

5. Let your MERIDA bike bounce on the ground from a small height. If there is any rattling, see where it comes from. Check the bearings and bolted connections, if necessary. Tighten them slightly, if necessary.
6. Finally, take a good look at the whole MERIDA bike **(b)** to detect any deformations, color changes or cracks **(c)**. Ride back very carefully by taking the shortest route possible, even if your MERIDA bike went through this check without any problems. Do not accelerate or brake hard and do not ride your bike out of the saddle. If you are in doubt about the performance of your MERIDA bike, have yourself picked up by car, instead of taking any risk.



Back home you need to check your MERIDA bike thoroughly. Damaged parts must be repaired or replaced. Ask your MERIDA dealer for advice.



Deformed components, especially components made of aluminum, can break without previous warning. They must not be repaired, i.e. straightened, as this will not reduce the imminent risk of breakage. This applies in particular to the fork, the handlebars, the stem, the cranks, the seat post and the pedals. When in doubt, it is for your safety always the better choice to have these parts replaced. Ask your MERIDA dealer for advice.



If your MERIDA bike is assembled with carbon components **(d)**, it is imperative that you have it checked by your MERIDA dealer after an accident or similar incident. Carbon is extremely strong and durable with very low weight, making it perfect for the production of high-performance parts. However, one of the inherent properties of carbon is that possible overstress may compromise the inner carbon-fiber structure without showing any visible deformation, as is the case with steel or aluminum. A damaged component can fail without previous warning. Risk of an accident!



Make it a rule to check the functioning and in particular the limit stop of the rear derailleur after a fall or if your MERIDA bike has toppled over.

Additional information “After an accident” with your MERIDA pedelec

1. Check the rechargeable battery (e+f). If the rechargeable battery is no longer properly in its holder or shows any damage, do not use your MERIDA pedelec any longer, at least not in the assistance mode. Switch off the drive and the rechargeable battery separately, if necessary. A damaged battery can lead to a short-circuit resulting in a sudden failure of the MERIDA pedelec assistance right at the moment when you need it.

Damage to the outer housing of the rechargeable battery can result in water or moisture entry which can lead to short circuits or electric shocks. The rechargeable battery may catch fire or even explode! In such a case, contact your MERIDA dealer immediately.

For more information see the system instructions of your drive manufacturer on this MERIDA CD-ROM.

2. Check that all values are displayed properly and fully on the drive HMI (g) or the display. Do not use your MERIDA pedelec, if the drive HMI shows an error message or a warning. In the case of critical errors the system switches off automatically. In the case of non-critical errors the system may be still operable.



Do not set off on your MERIDA pedelec when the drive HMI or the display shows a warning. In such a case, contact your MERIDA dealer immediately.

For more information see the system instructions of your drive manufacturer on this MERIDA CD-ROM.

3. Let your MERIDA pedelec bounce on the ground from a small height. If there is any rattling, see where it comes from. Check the bearings, the bolts and the proper seat of the battery (h), if necessary.

How to use quick-releases and thru axles

Quick-release

Most MERIDA bikes and MERIDA pedelecs are fitted with quick-releases (a) to ensure fast adjustments, assembly and disassembly. Be sure to check whether all quick-releases are tight before you set off on your MERIDA bike. Quick-releases should be handled with greatest care, as they affect your safety directly.

Practice the proper use of quick-releases to avoid any accidents.

Quick-release mechanisms essentially consist of two operative elements:

1. The hand lever (b) on one side of the hub which creates a clamping force via a cam when you close it.
2. The tightening nut (c) on the other side of the hub with which the preload on the threaded rod (quick-release axle) is set.



Do not touch the brake disc directly after having stopped, e.g. after a long down-hill ride, you may burn your fingers! Always let the brake disc cool down before opening the quick-release.



Make sure the levers of both wheel quick-releases are always on the side opposite to the chain. This will help you to avoid mounting the front wheel accidentally the wrong way round. In the case of MERIDA bikes with disc brakes and quick-releases having a 5-mm-axle, it may be reasonable to mount both quick-releases with the lever on the side of the chain drive. This helps you not to come into contact with the hot brake disc and prevents you from having your fingers burnt. If you are in doubt or if you have any questions, contact your MERIDA dealer.



Never ride your MERIDA bike without having checked first, whether the wheels are securely fastened (d). With an insufficiently closed quick-release the wheel can come loose, thus creating a serious risk of accident!



If your MERIDA bike is equipped with quick-releases, be sure to lock the frame to an immovable object together with the wheels when you leave it outside.

How to fasten components securely with a quick-release

Open the quick-release. You should now be able to read "Open" (e) on the lever. Make sure the component to be fastened is in the accurate position.

For more information see the chapters "Adjusting the MERIDA bike to the rider" and "The wheels and the tires" and the instructions of the component manufacturers on this MERIDA CD-ROM.

Move the lever back, as if to close it. Now you should be able to read "Close" (f) on the outside of the lever. When you start closing the lever you should feel virtually no resistance with your hand until the lever is at a right angle to the frame/fork.

When continuing to close the lever the resistance you feel should increase significantly and towards the end even more strength is required to close the lever. Use the ball of your thumb while your fingers pull on an immovable part, such as the fork (g) or a rear stay, but not on a brake disc or spoke, to push it in all the way.

In its end position, the lever should be at a right angle to the quick-release axle (h), i.e. it should not stick out. The lever should lie close to the frame or the fork so that it cannot be opened accidentally. Make sure, however, that the lever is easy to handle for actual quick use.



e



f



g



h

To check whether the lever is securely locked apply pressure to the end of the hand lever and try to turn it while it is closed. If you can turn the lever around, open it and increase the preload. Screw the tightening nut on the opposite side clockwise by half a turn. Close the quick-release lever and check it again for tightness.

Finally lift the pedelec a few centimeters, so that the wheel no longer touches the ground, and hit the tire from above. If it is properly fastened, the wheel will remain firmly fixed in the drop-outs of the frame or fork without producing any rattling.

If your seat post is equipped with a quick-release mechanism, check whether the saddle is firmly fixed by trying to twist it relative to the frame.



To be on the safe side you can replace the quick-releases by special locks. They can only be opened and closed with a special, coded key or an Allen key. If you are in doubt or if you have any questions, contact your MERIDA dealer.

Thru axles

Thru axles (a-d) provide suspension forks and rear shocks with a higher stiffness. Whenever your MERIDA bike is exposed to high loads, it remains directionally stable and the suspension elements work as usual.

There is currently a wide range of thru-axle systems available. Some systems are tightened with quick-releases. Other systems may require special tools for assembly or disassembly.

Whatever system you use, make sure during the assembly that the thru axles, the drop-outs and the hubs are clean. Clean the components with an absorbent cloth, if necessary, by using water and a little detergent. In case you do not succeed in adjusting and fixing the wheel, as described, contact your MERIDA dealer.



Improperly mounted wheels may throw you off your bike or result in serious accidents! Therefore, if you have the slightest doubt, contact your MERIDA dealer and ask them to explain the system of your MERIDA bike to you.



a



b



c



d



After wheel mounting test the brakes in stationary. You should reach the pressure point of the brake before the brake lever reaches the handlebars. In the case of hydraulic brakes pump them, if necessary, until you reach a precise pressure point. Check by compressing the suspension fork repeatedly.



To mount the axle only use the tools recommended by the manufacturer. Always use a torque wrench. Tighten carefully by approaching the prescribed maximum torque value in small steps (0.5 Nm increments) and check the proper fit of the component in between. Never exceed the maximum torque value indicated by the manufacturer! A too tight fixing of the axle can damage the axle, the fork leg or the rear frame.



Before mounting or replacing a fork/wheel combination with thru-axle system, be sure to read first the operating instructions of the respective suspension fork or wheel manufacturer on this MERIDA CD-ROM.

Manitou Hex Lock QR15 (e.g. Manitou Maltoc and Marvel)

The Manitou Hex Lock system (e) can be adjusted without tools and locked with a quarter turn after wheel mounting.

In contrast to the QR15-axle there is no need to unfold the lever and to unscrew the axle with difficulties. The only thing you have to do is to unfold the quick-release lever, to move it by a quarter turn and the axle is free.

The special feature is located at one end of the axle: the two pins which are designed to lock the axle in a respective guide in the drop-out.

Bring the front wheel into the right position between the drop-outs. Insert the axle with the Hex Lock quick-release lever open from the right through the drop-out and the hub (f). The marking on the axle must show towards the fork crown, i.e. upwards. The hex must slide into the left fork leg.

Once the axle is fully inserted, turn the axle until the two pins engage. Close the quick-release subsequently (g) by applying the force usually necessary for closing a quick-release.



Marzocchi 20mm Taperwall axle (e.g. Marzocchi 888 CR 180)

Mounting wheels

If your bike is equipped with a Marzocchi 20mm Taperwall thru-axle system (h), put the front wheel into the fork and mount the rotor in the brake caliper.

Bring the front wheel into the right position between the drop-outs. Insert the thru axle from the left through the fork and the hub.

Tighten a little the counterpart of the axle/bolt cap with an Allen key. Then tighten by using a torque wrench to a torque of 14 to 16 Nm.

After mounting the axle compress the fork a couple of times to make sure the axle is not jammed.

Lift your MERIDA bike a little and spin the front wheel. The front wheel must rotate freely in the area of the tire, the rim and the rotor.

Finish by tightening the four Allen bolts at the front of the fork by using a 4-mm Allen key to a torque value of 5 to 7 Nm. This will ensure the clamping of the axle.



More information are provided at www.manitoumtb.com

Dismounting wheels

To dismount the wheel release the four bolts which ensure the fixing of the axle to the fork by two to three turns. Do not unscrew the bolts completely. Subsequently, release the counterpart of the axle/bolt cap and remove the axle completely from the hub.



More information are provided at www.marzocchi.com

Marzocchi 15mm QR (e.g. Marzocchi 350CR)

Mounting wheels

If your bike is equipped with a Marzocchi 15mm QR system (a), put the front wheel into the fork and mount the rotor in the brake caliper.

Bring the front wheel into the right position between the drop-outs. Insert the thru axle with the E-Thru quick-release lever open from the right through the drop-out and the hub.

As soon as the axle thread engages with the thread of the left fork leg, close the axle by turning it clockwise. In doing so, keep hold of the counter nut on the left fork side. During the first rotations you should be able to rotate the thru axle nearly without resistance. Tighten the axle a little.

Close the Marzocchi quick-release lever like a usual quick-release lever.

At the beginning you should feel virtually no resistance and clamping effect. When the lever is at right angle the resistance you feel should increase significantly and towards the end you should need even more strength to close the lever.

If you do not succeed in closing the lever completely, open it again. Keep hold of the nut and turn the axle a little counterclockwise. Try again to close the quick-release lever.

Use the palm of your hand to push it in all the way while your fingers pull on the fork leg, but not on a spoke.

In its end position the quick-release lever should be tight so that it can no longer be turned. Make sure the quick-release lever does not stand out to the front or to the side and does not touch the fork. The best closing position is in nearly upright position in front of the lower leg.

Dismounting wheels

If your bike is equipped with a Marzocchi 15mm QR system, open the quick-release lever completely. Hold the nut on the left side tight and turn the thru axle counterclockwise.

Once you have screwed out completely the thru-axle thread from the thread of the lower leg, you can remove the thru axle completely.



More information are provided at www.marzocchi.com

RockShox Maxle 360™

Mounting wheels

If your bike is equipped with a Maxle thru-axle system with quick-release lever, put the front wheel into the fork and mount the rotor in the brake caliper.

Bring the front wheel into the right position between the drop-outs and slide the axle with open Maxle quick-release levers from the right side through the drop-out and the hub (e).

Make sure the quick-release lever is completely open (f) and lies in the axle recess. As soon as the axle thread engages with the thread of the left fork leg, close the axle by turning it clockwise. During the first rotations you should be able to rotate the thru axle nearly without resistance.

Now turn the lever forcefully clockwise until the axle is hand-tight. Make sure the quick-release lever does not slip out of the axle recess during tightening.

Finish by closing the Maxle thru axle quick-release lever like a usual quick-release lever (g). The quick-release lever should not stand out to the front and should fit snugly against the lower leg.



Dismounting wheels

If your bike is equipped with a Maxle thru-axle system, open the quick-release lever completely.

Make sure the open quick-release lever lies in the axle recess.

Open the thru axle by turning counterclockwise. Make sure the open quick-release lever does not slip out of the axle recess during opening.

Once you have screwed out completely the thru-axle thread from the thread of the lower leg, you can remove the thru axle completely.



More information are provided at www.rockshox.com

Fox E-Thru 15 QR

Mounting wheels

If your bike is equipped with a Fox E-Thru 15 mm system, put the front wheel into the fork and mount the rotor in the brake caliper.

Bring the front wheel into the right position between the drop-outs and slide the axle with open E-Thru quick-release lever from the left side through the drop-out and the hub (h).

As soon as the axle thread engages with the thread of the right fork leg, close the axle by turning it clockwise **(a)**. During the first rotations you should be able to rotate the thru axle nearly without resistance. Tighten the axle a little.

Close the E-Thru quick-release lever like a usual quick-release lever **(b)**.

At the beginning you should feel virtually no resistance and clamping effect. When the lever is at right angle the resistance you feel should increase significantly and towards the end you should need even more strength to close the lever.

If the lever cannot be closed completely, re-open it and turn the axle a little counterclockwise. Try again to close the quick-release lever **(c)**.

Use the palm of your hand to push it in all the way while your fingers pull on the fork leg, but not on a spoke or the rotor.

In its end position the quick-release lever should be tight so that it can no longer be turned. Make sure the quick-release lever does not stand out to the front or to the side. The best closing position is in nearly upright position in front of the lower leg **(d)**.

Dismounting wheels

If your bike is equipped with a Fox E-Thru 15 mm thru-axle system, open the quick-release lever completely. Open the thru axle by turning counterclockwise.



Once you have screwed out completely the thru-axle thread from the thread of the lower leg, you can remove the thru axle completely.



More information are provided at www.ridefox.com

SR SUNTOUR Q-LOC2 15QL C2 (e.g. SR SUNTOUR Auron LO-RC)

Mounting wheels

If your bike is equipped with an SR SUNTOUR Q-LOC-system 15 mm, put the front wheel into the fork and mount the rotor in the brake caliper, if necessary. Bring the front wheel into the right position between the drop-outs.

Open the quick-release lever of the SR SUNTOUR thru axle completely. Turn the counter nut on the thru axle counterclockwise until the expander releases.

Slide the axle with open quick-release lever and released expander from the right side through the drop-out and the hub until the thru axle engages with a clear "click". Now turn the quick-release lever forcefully clockwise until the axle is hand-tight.


Finish by closing the quick-release lever like a usual quick-release lever. Make sure the quick-release lever does not stand out to the front or to the side.

Dismounting wheels

If your bike is equipped with an SR SUNTOUR Q-LOC-system 15 mm, open the quick-release lever completely. Apply a little pressure on the counter nut and turn the counter nut counterclockwise until the expander releases.

Once you have screwed out completely the thru-axle thread from the thread of the lower leg, you can remove the thru axle completely.



 More information are provided at www.srsuntour-cycling.com

Shimano E-Thru 12 x 142 mm (rear wheel)

Mounting wheels

If your bike is equipped with a Shimano E-Thru 12 x 142 mm system (e), slide the rear wheel in the rear frame, mount the rotor in the brake caliper and guide the chain over the outmost sprocket of the cassette.

Bring the rear wheel into the right position between the drop-outs and slide the axle with open E-Thru quick-release lever from the left side through the drop-out and the hub (f).

As soon as the axle thread engages with the thread of the right fork leg, close the axle by turning it clockwise. During the first rotations you should be able to rotate the thru axle nearly without resistance. Tighten the axle a little.

Close the E-Thru quick-release lever like a usual quick-release lever (g).

At the beginning you should feel virtually no resistance and clamping effect. When the lever is at right angle the resistance you feel should increase significantly and towards the end you should need even more strength to close the lever.

If the lever cannot be closed completely, re-open it and turn the axle a little counterclockwise. Try again to close the quick-release lever.


Use the palm of your hand to push it in all the way while your fingers pull on the rear frame, but not on a spoke or the rotor.

In its end position the quick-release lever should be tight so that it can no longer be turned. Make sure the quick-release lever does not stand out to the rear or to the side. The best position is in parallel to a frame tube.

Dismounting wheels

If your bike is equipped with a Shimano E-Thru 12 x 142 mm thru-axle system, open the quick-release lever completely. Open the thru axle by turning counterclockwise.

Once you have screwed out completely the thru-axle thread from the thread of the lower leg, you can remove the thru axle completely (h).

 More information are provided at www.shimano.com

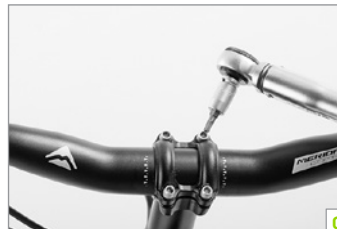
Adjusting the MERIDA bike to the rider

Your body height and proportions are decisive for the frame size of your MERIDA bike. Pay particular attention to the fact that there is enough clearance between your crotch and the top tube so that you do not hurt yourself when you have to get off your bike quickly.

By choosing a specific type of bike you roughly determine the posture you will be riding in **(a+b)**. However, some components of your MERIDA bike are especially designed so that you can adjust them to your body proportions up to a certain degree. This includes the seat post, the handlebars and the stem as well as the brake levers.

As all works require know-how, experience, suitable tools and skills, you should restrict yourself to adjusting your seating position **(c)**. Contact your MERIDA dealer, if you are not happy with your seating position or if you want something changed. They will see to your wishes the next time you leave your MERIDA bike at the workshop, e.g. for the first inspection.

After any adjustment/assembly work, be sure to make a short functional check as described in the chapter "Before every ride" and do a test ride on your MERIDA bike in an area free of traffic.



If you have a very small frame, there may be the danger of your foot colliding with the front wheel. Therefore, make sure your cleats are properly adjusted.



All tasks described in the following require the know-how of a mechanic and appropriate tools. Make it a rule to tighten the bolted connections always with greatest attention **(d)**. Increase the torque values bit by bit and check the fit of the component in between. Use a torque wrench and never exceed the maximum torque values! You will find the prescribed values in the chapter "Recommended torque settings", directly on the components and/or in the operating instructions of the component manufacturers on this MERIDA CD-ROM.



The seating position depends highly on how you want to use the MERIDA bike. Ask your MERIDA dealer or your trainer for help. The advice given below is suitable for typical MERIDA cross-country/marathon bikes.



If sitting on the saddle causes you trouble, e.g. because it numbs your crotch, this may be due to the saddle. Your MERIDA dealer has a very wide range of saddles available and will be pleased to advise you.

Adjusting the saddle to the correct height

The correct saddle height depends on the length of your legs. When pedaling, the ball of your foot should be positioned above the center of the pedal axle. With your feet in this position you should not be able to stretch your legs completely straight at the lowest point, otherwise your pedaling will become awkward **(e)**.

Check the height of your saddle with flat-soled shoes. This is best done with suitable cycling shoes.

Sit on the saddle and put your heel on the pedal at its lowest point. Your leg should be fully stretched and your hips should remain horizontal.

To adjust the saddle height loosen the quick-release lever **(f)** (see chapter "How to use quick-releases and thru axles") or the binder bolt of the seat post clamp at the top of the seat tube **(g)**. The latter requires suitable tools, e.g. an Allen key, with which you turn the bolt two to three turns counterclockwise. Now you can perform the vertical adjustment of the seat post.

Be sure not to pull out the seat post too far – the mark on the seat post (end, max., min., stop or the like) should always remain within the seat tube **(h)** – and always grease the part of an aluminum or titanium seat post that is inserted into a seat tube made of aluminum, titanium or steel. Do not grease carbon seat posts and/or carbon seat tubes in the clamping area! Use special carbon assembly paste instead.



Align the saddle with the frame by using the saddle nose and the bottom bracket or top tube as a reference point.

Clamp the seat post tight again by closing the quick-release, as described in the chapter "How to use quick-releases and thru axles" or by turning the seat post binder bolts clockwise in half turns. You should not need much strength in your hands to clamp the seat post sufficiently tight. Otherwise the seat post does not match the frame.

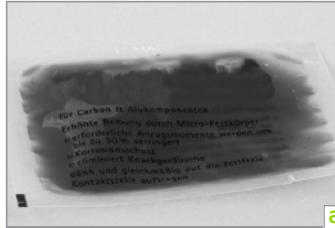
Verify in between that the seat post is sufficiently tight by taking hold of the saddle at both ends and then trying to rotate the seat post inside the seat tube. If it does rotate, gently retighten the binder bolt of the seat post clamp by half a turn and do the check again.

Does the leg stretch test now produce the correct result? Check by moving your foot and pedal to the lowest point. When the ball of your foot is exactly above the pedal center in the ideal pedaling position, your knee should be slightly bent. If this is the case, the saddle height is adjusted to the correct height.

Check whether you can touch the ground safely while sitting on the saddle by stretching your feet to the floor. If not, you should lower the saddle until you can, at least to begin with.



Never apply grease or oil into a seat tube of a frame made of carbon unless an alloy sleeve is inside the frame. If you mount a carbon seat post, do not put any grease on it, even if the frame is made of metal. Once greased, carbon components may never again ensure reliable clamping! Use special carbon assembly paste instead (a).



Make sure not to overtighten the binder bolt of the seat post clamp. Otherwise you may damage the seat post or the frame. Risk of an accident!



Never ride your bike with the seat post drawn out beyond the limit, maximum, or stop mark (b)! The seat post might break or cause severe damage to the frame. In the case of frames with seat tubes that extend beyond the top of the frame's top tube the seat post should be inserted into the seat tube at least below the bottom of the top tube and below the top of the rear stays! If seat post and frame require different minimum insertion depths, you should opt for the deeper insertion depth.



When riding steep downhill courses on your mountain bike, a lower saddle height is often better for some riding maneuvers. This allows a better control of the MERIDA mountain bike.



If the seat post does not move easily inside the seat tube or if it cannot be tightened sufficiently, ask your MERIDA dealer for advice. Do not use brute force!



Tighten carefully by approaching the prescribed maximum torque value in small steps (0.5 Nm increments) and check the proper fit of the component in between. Never exceed the maximum torque value indicated by the manufacturer!



In the case of height-adjustable seat posts, e.g. the Reverb from RockShox (c), the height is adjusted by pressing a button on the handlebars (d). Read the operating instructions of the manufacturer on this MERIDA CD-ROM.

Adjusting the height of the handlebars

The height of the handlebars compared to the saddle and the distance between saddle and handlebars determines how much your upper body will be inclined forward. Lowering the handlebars gives you a streamlined position and brings more weight to bear on the front wheel. However, it also entails an extremely forward leaning posture which is tiring and less comfortable, because it increases the strain on your wrists, arms, back, upper body and neck.

There are three different stem systems that allow vertical adjustment of the handlebars, i.e. the **conventional**, the **adjustable** and the **Aheadset®-stem**. These systems require special knowledge. In this regard, the descriptions hereafter may be incomplete. If you are in doubt or if you have any questions, contact your MERIDA dealer.



The stem (e) is one of the load bearing parts of your MERIDA bike. Changes to it can impair your safety. If you are in doubt or if you have any questions, contact your MERIDA dealer!



These routines require a certain amount of manual skill and (special) tools. Ask your MERIDA dealer to explain you both function and adjustment of your stem or let him do that work.



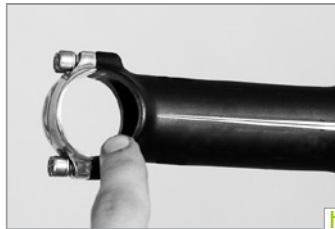
e



f



g



h



The bolted connections of stem and handlebars have to be tightened to the prescribed torque values. If you disregard the prescribed values, the handlebars or stem may come loose or break. Use a torque wrench (f) and never exceed the maximum torque values! You will find the prescribed values in the chapter "Recommended torque settings", directly on the components and/or in the operating instructions of the component manufacturers on this MERIDA CD-ROM.



Stems come in varying lengths (g) as well as shaft and binder tube diameters (h). A stem of inappropriate dimension can become a source of danger: Handlebars or stems can break, resulting in an accident. When replacing any parts, be sure to only use parts that bear the appropriate mark and, to be on the safe side, original spare parts. Your MERIDA dealer will be pleased to help you.



Make sure the handlebar/stem combination is approved by the handlebar and/or stem manufacturer.



Make sure the handlebar clamping area is free of sharp edges.

Conventional stems

Handlebars with conventional stems allow limited vertical adjustment. This is done by moving the stem up or down inside the fork steerer tube.

Release the expander bolt by two to three complete turns. The stem should now turn freely inside the fork. If it does not, release the bolt by tapping it gently with a rubber hammer (a). With Allen bolts you need to stick the Allen key into its head first, as it is normally counter-sunk and therefore impossible to be hit directly.

Now you can move the handlebar/stem unit up and down as a whole. Be sure not to pull out the stem too far. The mark on the stem (end, min, max, stop, limit or the like) should always remain within the tube (b). Setting the stem to a lower position can only add to your safety!

Realign the handlebars with the front wheel (c). Retighten the expander bolt with a torque wrench.

Tighten carefully by approaching the prescribed maximum torque value in small steps (0.5 Nm increments) and check the proper fit of the component in between.



a



b



c



d

Never exceed the maximum torque value indicated by the manufacturer! You will find the prescribed values in the chapter "Recommended torque settings", directly on the components and/or in the operating instructions of the component manufacturers on this MERIDA CD-ROM.

Check the seat of the stem by taking the front wheel between your legs and trying to turn the handlebars and stem relative to the wheel (d). If there is movement, you have to increase the torque value. If the handlebars are still too high or too low, you can replace the stem. This can be quite a big job, as it may mean taking off and remounting all the fittings on the handlebars. Ask your MERIDA dealer for advice about the different types of stems.



Never ride a MERIDA bike with a stem that has been drawn out beyond the mark for the maximum permissible height! Check all bolted connections and test your brakes before you set off in an area free of traffic!



Never try to unscrew the top race of the headset when you only want to adjust the stem, as you will otherwise alter the bearing play!

Adjustable stems

There are various solutions for adjusting the tilt of the front part of adjustable stems:

Some designs use bolts on the sides of the joint **(e)**, others have bolts coming from above or below, and others again are equipped with additional locking mechanisms or adjusting bolts.

Ask your MERIDA dealer to explain you both function and adjustment of your stem or, still better, let him do that work.

For more information see the chapter "Adjusting the height of the handlebars" and the instructions of the component manufacturers on this MERIDA CD-ROM.



Note that the bolted connections of adjustable stems and handlebars have to be tightened to their specified torques. If you disregard the prescribed values, the handlebars or stem may come loose or break. Use a torque wrench and observe the minimum and maximum torque values! You will find the prescribed values in the chapter "Recommended torque settings", directly on the components and/or in the operating instructions of the component manufacturers on this MERIDA CD-ROM.



Keep in mind that readjusting the position of the stem changes the position of handlebars, brake levers and shifters. Readjust these components, as described in the chapter "Adjusting the tilt of the handlebars and brake levers".



Stems for threadless systems, the Aheadset®-system

In the case of MERIDA bikes with Aheadset® headsets the stem also serves to adjust the bearing preload. If you change the position of the stem you have to readjust the bearing play (see the chapter "The headset" and the instructions of the component manufacturers on this MERIDA CD-ROM). The vertical setting range is determined by the intermediate rings, also referred to as spacers **(f)**. In the case of flip-flop stem models **(g)** the stem can be mounted the other way round to achieve a different handlebar height.

Unscrew the bolt at the top of the fork steerer tube **(h)** which serves to adjust the initial bearing pressure, remove the Ahead cap and release the bolts on either side of the stem by up to three turns. Remove the stem and spacers from the fork steerer tube. In doing so keep hold of both frame and fork to prevent the fork from slipping off the head tube.

You can determine the handlebar height by the arrangement of stem and spacers. Slip the remaining spacers onto the fork steerer tube above the stem. Adjust the headset, as described in the chapter "The headset".

If you want to turn the stem around, you have to also release the front bolts securing the handlebars (a). If the stem is fitted with a cap, you can simply take out the handlebars at this point. If it is not fitted with a cap, you have to remove the handlebar fittings.

Mount the handlebars and, if necessary, the handlebar fittings, as described in the chapter "Adjusting the tilt of the handlebars and brake levers" and/or in the instructions of the component manufacturers on this MERIDA CD-ROM.

Check whether the handlebars are firmly seated in the stem by trying to rotate the handlebars downwards (b). Verify whether the handlebar/stem unit can be twisted relative to the fork. Do this by taking the front wheel between your knees and trying to twist the handlebars. If there is movement, carefully tighten the bolts a little more and check again the proper fit (c).

Tighten carefully by approaching the prescribed maximum torque value in small steps (0.5 Nm increments) and check the proper fit of the component in between. Never exceed the maximum torque value indicated by the manufacturer!

Ask your MERIDA dealer to explain you both function and adjustment of your stem or, still better, let him do that work.



In the case of turned stems, it is possible that the cables are too short. In this case riding can be unsafe. If in doubt, ask your MERIDA dealer.



When removing spacers the fork steerer tube must be shortened. This change is irreversible. The shortening should be carried out by your MERIDA dealer, but only after you have found your preferred position.



Keep in mind that readjusting the position of the stem changes the position of handlebars, brake levers and shifters. Readjust these components, as described in the chapter "Adjusting the tilt of the handlebars and brake levers".

Correcting the fore-to-aft position and horizontal tilt of the saddle

The inclination of your upper body (d), and hence your riding comfort and pedaling power, are also influenced by the distance between the grips of the handlebars and the saddle. This distance can be altered slightly by changing the position of the saddle rails in the seat post clamp. However, this also influences your pedaling. Whether the saddle is positioned more to the front or to the back of the bike will alter how rearward the pedaling position of your legs is.

You need to have the saddle horizontal in order to pedal in a relaxed manner. If it is tilted, you will constantly have to lean against the handlebars to prevent yourself from slipping off the saddle.



The bolted connections of the seat post have to be tightened to the prescribed torque value. Use a torque wrench and never exceed the maximum torque values! You will find the prescribed values in the chapter "Recommended torque settings", directly on the components and/or in the operating instructions of the component manufacturers on this MERIDA CD-ROM.



Make sure the saddle is clamped within the range of the marking on the saddle rail (e). Otherwise the saddle rail can fail! Check the bolts by using a torque wrench once a month according to the prescribed values.



The setting range of the saddle is very small. Replacing the stem allows you to make far bigger adjustments to the rider's fore-to-aft position, as stems come in different lengths. In doing so you may achieve differences of more than ten centimeters. In this case you usually would have to adjust the length of the cables – a job best left to your MERIDA dealer!



The manufacturers of saddles deliver their products with detailed instructions. You find these instructions on this MERIDA CD-ROM. Read them carefully before adjusting the position of your saddle. If you are in doubt or if you have any questions, contact your MERIDA dealer.



Adjusting saddle position and tilt

With patent seat posts (f) one central Allen bolt secures the clamping mechanism, which controls the tilt and the horizontal position of the saddle. Some seat posts have two bolts side-by-side.

Release the bolt(s) at the top of the seat post. Release the bolt(s) two to three turns counterclockwise at the most, otherwise the whole assembly can come apart. Move the saddle forth or back, as desired. You may have to give the saddle a light blow to make it move. Please observe the markings on the saddle rail.

Make sure the seat of the saddle remains horizontal (g) as you retighten the bolt(s). Your MERIDA bike should stand on level ground while you adjust the saddle.

Having found your preferred position, make sure both clamp halves fit snugly around the saddle rails before tightening the bolt(s) to the correct torque value as prescribed by the seat post manufacturer.

Retighten the bolt(s) with a torque wrench according to the instructions of the manufacturer (h). After fastening the saddle, check whether it resists tilting by bringing your weight to bear on it once with your hands at either end of the saddle.



Poorly tightened or loosening bolts can fail.
Risk of an accident!



Check the bolts by using a torque wrench once a month according to the values indicated directly on the components and/or in the instructions of the component manufacturers on this MERIDA CD-ROM.

Clamping with two bolts in line: (a) release both bolts two to three turns counterclockwise, otherwise the whole assembly can come apart. Move the saddle forward or backward as desired to adjust the horizontal position. You may have to give the saddle a light blow to make it move. Please observe the markings on the saddle rail.

Having found your preferred position, make sure both clamp halves fit snugly around the saddle rails before tightening the bolt(s) to the correct torque value as prescribed by the seat post manufacturer.

Tighten both bolts evenly **(b)** so that the saddle remains at the same angle. If you wish to lower the nose of the saddle a little, tighten the front bolt clockwise. You might have to loosen the rear bolt a little as well. To lower the rear part of the saddle, the rear bolt has to be tightened clockwise and the front bolt has to be released, if necessary.



a



b



c



d

Check the strength while you press with your hands alternate at the top and back of the saddle. The saddle may not move **(c)**.



Poorly tightened or loosening bolts can fail.
Risk of an accident!



Check the bolts by using a torque wrench once a month according to the values indicated directly on the components and/or in the instructions of the component manufacturers on this MERIDA CD-ROM.

If you have a **single bolt system (d)**, unscrew the fixing bolt as far as possible without loosening the lock nut on the outer side of the clamping device. In general, it is not necessary to take the mechanism completely apart, if it is already equipped with the correct outer clamps for your saddle.

If you do find it necessary to unscrew the single fixing bolt completely, remove it from the clamping device. This releases the outer clamping parts. The inner clamping parts are held in position with a rubber retention plate.

Mount the saddle rails into the inner clamping parts, add the outer parts and re-insert the fixing bolt. If the width of the saddle rails does not fit exactly into the clamp grooves, do not try to force them in.

The clamping mechanism or the saddle rails could break and result in an accident and/or injuries to the rider.

Use a different saddle model or contact your MERIDA dealer.

If the saddle rails fit into the clamp grooves, slide the saddle on the seat post and ensure that the clamp is positioned midway along the total length of the rails **(e)**. Position the saddle so that its upper surface is parallel to the ground. Tighten the bolt gradually and make sure

- 1) the clamping device is still accurately mounted on the carbon seat post head and
- 2) the clamp is tightening evenly around each rail.

Once there is uniform hold on both rails, tighten the bolt gradually with a torque wrench **(f)** until you have reached the maximum torque value indicated in Newton meters (Nm) on the seat post.



Poorly tightened or loosening bolts can fail. Risk of an accident!



Check the bolts by using a torque wrench once a month according to the values indicated directly on the components and/or in the instructions of the component manufacturers on this MERIDA CD-ROM.



Adjusting the brake lever reach

With most brake systems the distance between the brake levers and the handlebar grips is adjustable. This gives in particular riders with small hands the convenience of bringing the brake levers closer to the handlebars **(g)**.

On most bikes there is a small adjusting screw near the point where the brake cable of a cable brake enters the brake lever unit or at the lever itself. Turn this bolt clockwise and watch how the lever adjusts as you do so **(h)**.

Hydraulic brakes are also fitted with adjusting devices at the brake lever. There are different systems. Ask your MERIDA dealer for advice or read the instructions of the component manufacturers on this MERIDA CD-ROM.

When adjusting the lever reach, make sure the first phalanx of the index finger reaches around the brake lever. Check the proper adjustment and functioning of the brake system subsequently, as described in the chapter "The brake system" and in the instructions of the component manufacturer on this MERIDA CD-ROM.



Make sure you cannot pull the brake levers all the way to the handlebars. Your maximum braking force should be reached short of this point.



In the case of hydraulic brakes and disc brakes follow the instructions of the brake manufacturer, which you can find on this MERIDA CD-ROM. If you are in doubt or if you have any questions, contact your MERIDA dealer.

Adjusting the tilt of the handlebars and brake levers

The handlebars are usually slightly bent at the ends. Set the handlebars to a position in which your wrists are relaxed and not turned too much outwards.

Release the Allen bolt(s) at the bottom or front side of the stem. Turn the handlebars to the desired position. Make sure the handlebars are accurately centered in the stem (a). Carefully retighten the bolt(s) with the torque wrench.

Make sure the upper and lower clamping slots of the stem are parallel and identical in width (b). If you have a stem with several bolts, tighten them evenly in a cross pattern by using a torque wrench and observe the recommended torque values.

Try rotating the handlebars once clamped in the stem (c) and tighten the bolt a little more, if necessary. Use a torque wrench and never exceed the maximum torque values!



a



b



c



d

You find them directly on the components and/or in the instructions of the component manufacturers on this MERIDA CD-ROM.

If the handlebars are not tight with the prescribed torque value, use carbon assembly paste.

After adjusting the handlebars you need to adjust the brake lever/shifter units. Release the Allen bolt at either unit. Turn the levers relative to the handlebars. Sit in the saddle and place your fingers on the brake levers.

Check whether the back of your hand forms a straight line with the line of your forearm (d). Retighten the units with a torque wrench and do a twist test! The brake levers need not be absolutely tight. In case of a fall it is an advantage when the brake levers can be turned.



Tighten the bolts at the stem until the clamping slots between the stem body and the faceplate are parallel and identical in width at the top and at the bottom. Tighten the bolts evenly and in a cross pattern, i.e. alternately and gradually, by using a torque wrench to the lower value of the recommended torque values.



Note that the bolted connections of stem, handlebars, bar ends and brakes have to be tightened to their specified torques. Use a torque wrench and never exceed the maximum torque values! You will find the prescribed values in the chapter "Recommended torque settings", directly on the components and/or in the operating instructions of the component manufacturers on this MERIDA CD-ROM.

Bar ends and multi-position handlebars give you additional ways of gripping the handlebars.



Be aware that the distance you need to stop your bike increases, when you are riding with your hands on bar ends (e+f) or on multi-position handlebars. The brake levers are not always within easy reach.



Never fix bar ends in vertical position or with their ends pointing rearwards as this would increase the risk of injury in the event of an accident.



If you want to mount multi-position handlebars or bar ends to the aluminum handlebars of your MERIDA bike, inform yourself in advance whether these components are permitted on your MERIDA bike. If necessary, contact your MERIDA dealer before mounting.



e



f



g



h

Special features of MERIDA dirt and freeride bikes

Dirt biking (g) and freeriding (h) are among the most challenging uses that you can perform on your MERIDA bike. Jumps, riding the stairs, downhill races and sharp bends in difficult or extremely rough terrain etc. are an undue stress for rider and material and require a highly durable MERIDA bike with full-suspension, if necessary. A cross-country, tour or marathon mountain bike would fail and result in a severe accident! Ask your MERIDA dealer for bikes which are suitable for this sport.

Even though the above-mentioned specialized types of MERIDA bikes are built for sport cycling and hard use, their resistance to stress is limited.

In particular the following actions may cause an undue stress for the material and result in a failure:

- Incorrect jumps on sharp edges, jumps with a landing on the front wheel, too short jumps or tricks that are not completed before the landing
- Landing on the counter slope or between two slopes; on flat terrain jumps with rotation crossways to the track or with hands not on the handlebars/feet off the pedals

Be sure to also avoid the following, as this would put too much stress on the material resulting in premature wear or failure:

- Undue stress for the chain by riding with too low chain tension
- Inappropriate grinding (sliding on chain or chain-wheel or sliding on frame and drop-outs)
- Undue stress for the wheels by riding with too low air pressure
- Undue stress for the frame and bike parts by riding with too soft suspension elements



MERIDA bikes for dirt biking and freeriding are true-bred sports bikes (a+b). For your own safety, do not overestimate your riding skills. Please note that though looking easy the tricks of a professional are hazardous to your life and limb. Always protect yourself with appropriate and suitable clothing.



Due to the specific intended use, some dirt bikes are fitted with only one brake. Do not ride these MERIDA bikes on public roads, but only on enclosed terrain.



Not all MERIDA mountain bikes which look like a dirt or freeride bike are actually sports bikes! If you are in doubt or if you have any questions, contact your MERIDA dealer.

Adjusting the saddle height

In the case of MERIDA dirt and freeride bikes the saddle height depends on the use. The seating position is not comparable to that of other bikes, as in this case it is all about maximum control and freedom of movement on the bike.

When you set off for a long cycling tour, the saddle should be set to a height which gives maximum pedaling comfort and efficiency. When pedaling, the ball of your foot should be positioned above the center of the pedal axle. With your feet in this position you should not be able to stretch your legs completely straight at the lowest point, otherwise your pedaling will become awkward.

The height of the saddle is adjustable. Further adjustments possibly known from your regular MERIDA bike cannot be made on dirt and freeride bikes.

For dirt biking or freeriding the saddle is set to a very low height with a rearward tilt. This improves your mobility on the bike under extreme conditions.

Ask your trainer, your club or your MERIDA dealer for the correct seating position. The instructions on how to adjust the saddle are given in the chapter "Adjusting the MERIDA bike to the rider".



MERIDA mountain bikes of this type can be worn down after one season only that major and/or load bearing parts must be replaced. Have bikes of these types thoroughly checked by your MERIDA dealer at least every three to four months.



A saddle at low height is recommended in general for steep downhill rides with your MERIDA mountain bike. Long pedaling with low saddle height can result in knee problems.



In the case of height-adjustable seat posts, e.g. the Reverb from RockShox, the height is adjusted by pressing a button on the handlebars. Read the operating instructions of the manufacturer on this MERIDA CD-ROM.



The brake system

Brakes (e-h) are used to adjust your speed to the surrounding terrain and traffic. In an emergency situation, the brakes must bring your MERIDA bike to a halt as quickly as possible.

In the event of such emergency brakings, the rider's weight shifts forward abruptly, thus reducing the load on the rear wheel. The rate of deceleration is primarily limited by the danger of the rear wheel losing contact with the ground, resulting in an overturning of the MERIDA bike and, secondly, by the grip of the tires on the road. This problem becomes particularly acute when riding downhill. Therefore, in case of an emergency braking you should try to shift your weight towards the rear and the ground as far as possible.

Actuate both brakes simultaneously and bear in mind that, due to the weight transfer, the front brakes can generate a far better braking effect on a surface with good grip.

The braking conditions on unpaved surfaces differ, i.e. overbraking the front wheel can make the wheel slip away. Make yourself familiar with the operation before you set off for the first time. Practice braking on different kinds of surface in an area free of traffic.

There are various types of brake systems that may be subject to the following problems:

Rim brakes (a) are liable to overheating as a result of too long braking or brake dragging. This can damage the inner tube or make the tire slip on the rim, causing a sudden loss of air which could lead to a serious accident in the process.

With **disc brakes (b+c)** prolonged braking or permanent dragging of brake pads can also lead to an overheating of the brake system. This can result in a reduction of the braking force or even brake failure. Risk of an accident!

When riding downhill, get used to braking hard and then releasing the brake again, whenever the road surface and the situation allows for it. If you are in doubt about the braking action, stop and let the brake system cool down.



The assignment of brake lever to brake caliper can vary, e.g. left lever acts on front brake. Have a look at the bike card and check whether the brake lever of the front brake is on the side you are used to (right or left). If it is not, ask your MERIDA dealer to switch the brake levers before you set off for the first time.



Be careful while getting used to the brakes. Practice emergency stops in a place clear of traffic until you are comfortable controlling your MERIDA bike. This can save you from having accidents in road traffic.



Wet weather reduces the braking effect and the road grip of the tires. Be aware of longer stopping distances when riding in the rain, reduce your speed and actuate the brakes carefully.



Ensure that braking surfaces and brake pads are absolutely free of wax, grease and oil. Risk of an accident!



When replacing any parts, be sure to only use parts that bear the appropriate mark and, to be on the safe side, original spare parts (d). Your MERIDA dealer will be pleased to help you.



Be sure to read the instructions of the brake manufacturers on this MERIDA CD-ROM before you start to readjust or to service the brake or before doing any work whatsoever.

Rim brakes

V-brakes and cantilever brakes

Functioning and wear

V-brakes **(e)** and cantilever brakes **(f)** have two brake arms mounted separately on either side of the rim. When actuating the brake lever, both arms are pressed together by the cable, the pads touching the rim.

The friction generated by braking causes wear to the brake pads as well as to the rims. Frequent rides in the rain and dirt and over hilly terrain can accelerate wear on both braking surfaces. Some rims are provided with wear indicators, e.g. grooves or circular indentations. If the rim is worn down to the point where the grooves or indentations are no longer visible, it needs to be replaced. Once the abrasion of the rim has reached a certain critical point, the rim may break under the tire pressure. This can make the wheel jam or the inner tube burst. Risk of an accident!

Functional check

Check whether the brake blocks **(g)** are perfectly aligned with the rims and are still sufficiently thick. You can judge the wear of the brake pads by the appearance of grooves. If the pads are worn down to the bottom of the grooves **(h)**, it is time to replace them. Be sure to observe the according instructions of the respective manufacturer.



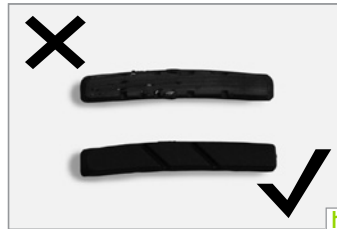
e



f



g



h

See your MERIDA dealer and ask them to examine the remaining thickness of the rims when you have worn through your second set of brake pads at the latest. He has special measuring devices to determine the remaining thickness of the rims.

The brake pads must hit the rim simultaneously, first touching it with the front portion of their surface. At the moment of first contact the rear portion of the facing should be a millimeter away from the rim. Viewed from the top the brake pads form a “V” with the trough pointing to the front. This setting is to prevent the brake pads from screeching when applied. The brake lever must always remain clear of the handlebars. You should not even be able to pull them all the way to the handlebars in the event of an emergency stop. If this is the case, however, observe the following chapter “Synchronizing and readjusting”. Only a successful passing of all these points will ensure a correctly adjusted brake.



Brake cables which are damaged, e.g. frayed, must be replaced immediately, as they can otherwise fail in a critical moment, possibly causing a crash!



Adjusting the position of the brake blocks relative to the rims requires a considerable degree of skill. Replacing and adjusting the brake blocks is a job best left to your MERIDA dealer.



Have your rims regularly inspected and measured by your MERIDA dealer.

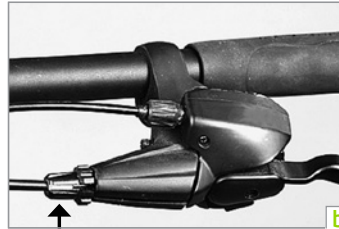
Synchronizing and readjusting

Almost all brake designs have a bolt located next to one or both brake calipers for adjusting the spring preload (**a**). Turn the bolt slowly and watch how the gap changes between brake pads and rim.

Adjust the spring in a way that with an unapplied brake the gaps are equal on either side and the brake pads touch the rim simultaneously during braking.

The position of the brake lever where the brake starts to act, also referred to as the pressure point, can be adjusted to the size of the hand as well as to individual convenience by readjusting the brake cable. Make absolutely sure you cannot pull the brake lever all the way to the handlebar grip.

With an unapplied brake the brake pads should not be too close to the rim sides, otherwise they could drag along the rim during riding. Before doing this adjustment, observe the notes in the chapter "Adjusting the brake lever reach".



To readjust the brakes, unscrew the knurled lock ring located at the point where the brake cable enters the brake lever on the handlebars (**b**). Unscrew the knurled, slotted adjusting bolt by a few turns. This reduces the free travel of the brake lever.

Keeping the adjusting bolt firm, tighten the lock ring against the brake lever unit. This prevents the adjusting bolt from coming loose by itself. Ensure that the slot of the bolt faces neither forward nor upward, as this would permit water or dirt to enter more easily.



Always test the brakes' function when stationary (c) after adjusting them, making sure the brake pads engage fully with the rim when you pull them hard.

Hydraulic rim brakes

Functioning and wear

Common hydraulic rim brakes consist of two brake assemblies that are mounted on the left and right side of the rim and connected by an assembly plate and, if necessary by a brake booster. W Actuating the brake lever compresses the hydraulic pistons through oil pressure, pushing the brake pads against the rims.

The friction generated by braking causes wear to the brake pads as well as to the rims. Frequent rides in the rain and dirt and over hilly terrain can accelerate wear on both braking surfaces. Some rims are provided with wear indicators, e.g. grooves or circular indentations. If the rim is worn down to the point where the grooves or indentations are no longer visible, it needs to be replaced.

Once the abrasion of one rim has reached a certain critical point, the rim may break under the tire pressure. This can make the wheel jam or the inner tube burst. Risk of an accident!

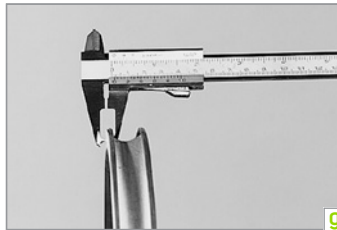
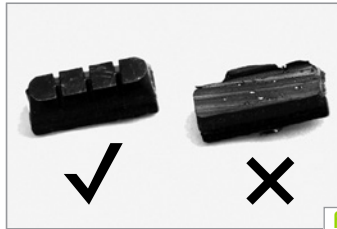
Keep the hydraulic brake assemblies, especially the brake pad area, clean, as dirt can prevent the pads from travelling back in their rest position. Check the lines and connections from time to time for leaks.



Loose connections or leaky brake lines drastically impair the braking effect. If you find leaks in the brake system or buckled lines, contact your MERIDA dealer. Risk of an accident!

Functional check

Check whether the brake blocks are perfectly aligned with the rims **(d+e)** and are still sufficiently thick. You can judge the wear of the brake pads by the appearance of grooves **(f)**. If the pads are worn down to the bottom of the grooves, it is time to replace them. Be sure to observe the according instructions of the respective manufacturer.



See your MERIDA dealer and ask him to examine the remaining thickness of the rims at the latest when you are through your second set of brake pads. He has special measuring devices to determine the remaining thickness of the rims **(g)**.

The brake pads must hit the rim simultaneously and in parallel. This setting is to prevent the brake pads from screeching when applied.

The brake lever must always remain clear of the handlebars. You should not even be able to pull them all the way to the handlebars in the event of an emergency stop **(h)**. If this is the case, however, observe the following chapter "Synchronizing and readjusting".

Only a successful passing of all these points will ensure a correctly adjusted brake.



Adjusting the position of the brake blocks relative to the rims requires a considerable degree of skill. Replacing and adjusting the brake blocks is a job best left to your MERIDA dealer.



Have your rims regularly inspected and measured by your MERIDA dealer.

Synchronizing and readjusting

Hydraulic rim brakes are synchronized together with the alignment of the brake pads. The position of the brake lever where the brake starts to act, also referred to as the pressure point, can be adjusted to the size of the hand as well as to individual convenience at the same time. Also observe in this regard the instructions given in the chapter "Adjusting the brake lever reach".

As the brake pads wear down, the pressure point moves towards the handlebar grips. Make absolutely sure you cannot pull the brake lever all the way to the handlebar grip. Most brake models are, however, fitted with a bolt or a small knob at the brake lever unit to compensate the wear. Observe the operating instructions of the brake manufacturer on this MERIDA CD-ROM. If you are in doubt or if you have any questions, contact your MERIDA dealer.



Read the instructions of the brake manufacturer on this MERIDA CD-ROM carefully before removing the wheel or doing any maintenance work. Improper operation can lead to brake failure.



Disc brakes

Functioning and wear

The most striking feature of disc brakes (**a-c**) is their outstanding braking effect. They respond a lot faster in wet conditions than rim brakes do and achieve their normal high braking power within a very short time. They require little maintenance and do not wear down the rims as rim brakes do. Disc brakes consist of the brake caliper, the rotor, the brake lines or cables as well as the brake lever unit (**d**). Actuating the brake lever compresses the hydraulic pistons through hydraulic pressure or mechanically, pushing the brake pads against the rotor.

The friction generated by braking causes wear to the brake pads as well as to the rotors. Frequent rides in the rain and dirt and over hilly terrain can accelerate wear on both braking surfaces. Depending on the manufacturer and the model there are different ways of checking the brake pads and rotors for their wear limits.



New brake pads have to be broken in until they reach their optimal braking power. Accelerate your MERIDA bike about 30 to 50 times to around 30 kmh and bring it to a halt each time. This procedure is finished, when the force required at the lever for braking has stopped decreasing.



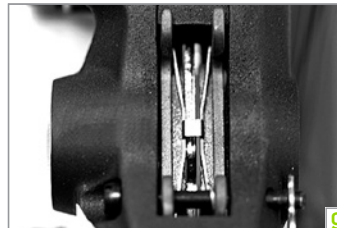
Disc brakes get hot in use. For this reason do not touch the rotors directly after stopping, especially after a long downhill ride.



Dirty brake pads and rotors can lead to drastically reduced braking force. Therefore, make sure the brake remains free of oil and other fluids, especially when you clean your MERIDA bike or grease the chain. Dirty brake pads cannot be cleaned under any circumstances, they must be replaced! Rotors can be cleaned with special brake cleaners or with warm water and mild soap.



Unusual noises (scratching, chafing etc.) during braking and/or a noticeable change of the braking force (stronger or weaker) are indications that the brake pads are soiled or worn down. Check the brake pads and replace them, if necessary (e). Otherwise you risk further damage, e.g. to the rotor, or even an accident due to brake failure! If you are in doubt, contact your MERIDA dealer.



Hydraulic disc brakes

Functional check

Regularly check the lines and connections for leaks while pulling on the lever. Contact your MERIDA dealer immediately in the event of a brake liquid leakage. A leak in the brake lines can render the brake ineffective. Risk of an accident!

Wear and maintenance

Check the pads for wear at regular intervals (f+g) by following the operating instructions of the respective manufacturer.



Loose connections or leaky brake lines drastically impair the braking effect. If you find leaks in the brake system or kinked lines, contact your MERIDA dealer immediately!



If your brake system works with DOT brake fluid, the latter needs to be replaced regularly according to the intervals prescribed by the manufacturer.



Do not open the brake lines. Brake fluid can be very unhealthy and damaging to the paint if it leaks out.



Read in any case the instructions of the brake manufacturer on this MERIDA CD-ROM carefully before removing the wheel or doing any maintenance work. Improper operation can lead to brake failure.

Mechanical disc brakes

Functional check

The more the brake pads of mechanical disc brakes wear down, the longer is the brake lever travel. Regularly check whether you get a positive braking response before the lever touches the handlebars. Make sure the brake cables are in sound condition!



Damaged cables (a) should be replaced immediately, as they can snap. Risk of an accident!

Wear and maintenance

To a certain extent, the wear of the brake pads can be compensated for directly at the brake lever. Unscrew the knurled lock nut on the bolt through which the cable enters the grip and then unscrew the bolt until the lever has the desired travel (b). Retighten the lock nut by taking care that the slit of the bolt head does not face upward or forward, as this would permit an unnecessarily high amount of water or dirt to enter.

After readjusting check the functioning and make sure the brake pads do not drag when releasing the brake lever and spinning the wheel.



Repeated readjustment at the brake lever makes the arm on the brake caliper change its position. This can make the brake less effective and result in a complete brake failure in an extreme case. Risk of an accident!

Some models offer further ways of adjusting the brakes directly at the brake caliper, though this requires a certain amount of skill. Read the instructions of the brake manufacturer on this MERIDA CD-ROM carefully before adjusting the brake. If you are in doubt or if you have any questions, contact your MERIDA dealer.



Repeated readjustment at the brake lever can drastically reduce the maximum braking effect.



Read in any case the instructions of the brake manufacturer on this MERIDA CD-ROM carefully before removing the wheel or doing any maintenance work. Improper operation can lead to brake failure.

The gears

Derailleur gears

The gears **(e+f)** of your MERIDA bike serve to adjust the gear ratio to the terrain you are riding on and the desired speed.

A low gear (where in the case of derailleur gears the chain runs on the small chainwheel and a large sprocket) allows you to climb steep hills with moderate pedaling force. You must, however, pedal at a faster pace. High gears (large chainwheel, small sprocket) are for riding downhill. Every turn of the pedals takes you many meters forward at correspondingly high speed.



MERIDA pedelecs have only one chainwheel (g). As a consequence there is no front derailleur and no shifter on the left handlebars.



Continue pedaling at reduced cadence during gear shifting, however, at clearly reduced pedaling force. In particular when shifting through the chainwheels continue pedaling slowly and without force.



With MERIDA pedelecs reduce the cadence and the pedaling force shortly before you start shifting. In doing so there is a short interruption of the drive. If you continue pedaling, the high chain forces could result in a chain failure.



e



f



g



h



bike.

Practice shifting gears in a place free of traffic **(h)** until you are familiar with the functioning of the levers or twist grips of your MERIDA



Read the gear manufacturer's operating instructions on this MERIDA CD-ROM carefully and practice shifting gears until you are familiar with it before you set off for the first time.

Functioning and operation

Derailleur gears always work according to the following principle:

- Large front chainwheel
 - heavy gear – bigger transmission
- Small chainwheel (front)
 - easy gear – smaller transmission
- Large sprocket (rear)
 - easy gear – smaller transmission
- Small sprocket (rear)
 - heavy gear – bigger transmission

Normally the shifters are mounted as follows:

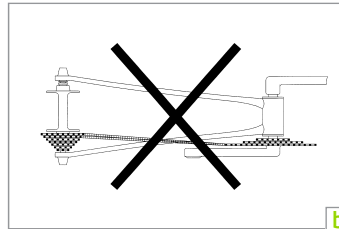
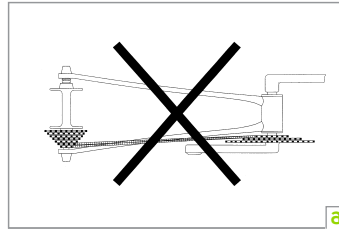
- Shifter right – rear sprockets
- Shifter left – front chainwheels

Modern mountain bikes can have up to 33 gears. As there are, however, overlapping ranges, actually 15 to 18 gears are usable. It is not advisable to use gears which involve an extremely oblique run of the chain, as this reduces power transmission efficiency and hastens wear of the chain. An unfavorable run of the chain is when the smallest chainwheel is used with one of the two or three outermost (smallest) sprockets **(a)** or when the largest chainwheel is used with one of the inmost (largest) sprockets **(b)**.

The bottom bracket **(c)** is the interface between cranks and frame. There are different designs, in some cases the bearing spindle is part of the bottom bracket, in some other cases it is integrated into the right crank. Sealed bottom brackets are maintenance free and delivered without play ex works. The bottom bracket in the frame must be checked for play at regular intervals.

Also check at regular intervals whether the cranks are firmly attached to the bearing spindle or whether there is play. Grab the crank and try to jiggle it forcefully. It must be absolutely free of play **(d)**. If you notice any play, contact your MERIDA dealer immediately.

Depending on the gear system, gear shifting is initiated by actuating a shifter **(e)**, a brake and shift lever unit or by a short turn of the wrist with twist grips. Continue pedaling during gear shifting, however, with reduced pedaling force.



Please find below the principles of the shift lever types and their operation. It is, however, also possible that your new MERIDA bike has a gear system that is not listed below.

In the case of shifters pressing the large shifter (thumb shifter) **(f)** moves the chain towards the larger chainwheels/sprockets.

That means that any gear shift made by pressing the large thumb shifter on the right produces a lower gear. This is an indexed shifting system with the option of shifting several gears with one action. Actuating the large thumb shifter on the left produces a higher gear.

Pulling the small lever located in front of the handlebars from the rider's viewpoint and actuated with the index finger (index finger lever) **(g)** shifts the chain towards the smaller chainwheels/sprockets, i.e. on the right side to the higher gears and on the left side to the lower gears.

i Read in any case carefully the operating instructions of the gear manufacturer on this MERIDA CD-ROM. Make yourself familiar with your new gears in an area free of traffic, if necessary. If you are in doubt or if you have any questions, contact your MERIDA dealer.

The principle of twist grips is different **(h)**. Turning the right-hand grip towards you makes for a lower gear ratio, while the same movement on the left produces a higher gear – and vice versa. The shifting direction may vary in this case, as well.



Always wear straight-cut trousers or use trouser clips or the like. To make sure your trousers do not get caught in the chain or the chainwheels. Risk of an accident!



Shifting gears under load, i.e. while pedaling hard, can make the chain slip. At the front derailleur the chain may even slip off the chainwheels and result in an accident! At the very least the service life of the chain would be reduced considerably.



If there is play between bearing spindle and cranks, they can sustain damage. Risk of breakage!



Avoid gears which involve an extremely oblique run of the chain as this will increase wear!



It is crucial when switching gears to continue pedaling smoothly and without too much force. Do not shift under load, and in particular not at the front derailleur, as this will shorten the service life of your chain considerably. Furthermore, this can lead to a chain-suck, i.e. the chain can get jammed between Chainstay and chainwheels.



e



f



g



h

Checking and readjusting

The derailleur gears of your bike were carefully adjusted by your MERIDA dealer before delivery. However, Bowden cables may stretch a little over the first kilometers, making gear shifting imprecise and the chain rattle.

Adjusting the front and rear derailleur accurately is a job only for an experienced mechanic. If you want to try to do the adjustment on your own, observe in addition the operating instructions of the gear manufacturer on this MERIDA CD-ROM. Contact your MERIDA dealer if you have any problems with the gears.



For your own safety, bring your MERIDA bike to your MERIDA dealer for its first inspection after 100 to 300 kilometers, 5 to 15 hours of initial use or four to six weeks, and at the very latest after three months.

Adjusting the rear derailleur

Increase the tension of the Bowden cable by turning the adjustable cable stop at the shifter lever **(a)** or the adjusting bolt through which it runs into the rear derailleur. To do so, shift to the smallest sprocket and turn the bolts counterclockwise in half turns until the cable is slightly tensioned.

After tensioning the Bowden cable check whether the chain immediately climbs onto the next larger sprocket. To find out you either have to turn the cranks by hand **(b)** or ride the MERIDA bike and shift through the gears **(c)**.

If the chain easily climbs onto the next larger sprocket, check whether it just as easily shifts to the small sprockets. If it does not, release the respective adjusting bolt a little. You may need several tries.



Adjusting the front and rear derailleur accurately is a job for an experienced mechanic. Observe in any case the operating instructions of the gear manufacturer on this MERIDA CD-ROM. If you have any problems with the gears, contact your MERIDA dealer.



Ask a helper to lift the rear wheel. By turning the cranks and shifting through you can easily check the function.

Adjusting the limit stops

The rear derailleur is equipped with limit screws **(d)** which limit the movement range of the derailleur, thus preventing the derailleur and chain from colliding with the spokes or the chain from dropping off the smallest sprocket. The limit screws are adjusted by your MERIDA dealer. They do not alter their position during normal use.

If necessary, correct the position by means of the limit screws. The limit screws on rear derailleurs are often marked "H" for high gear and "L" for low gear. "High gear" means that the chain is running on the smallest sprocket. Turn the screw clockwise to shift the rear derailleur towards the wheel and counterclockwise to shift it away from the wheel.

Shift to the biggest (inmost) sprocket and check whether the teeth of the sprocket and the teeth of the guide pulley are all in a perfectly vertical line. Turn the limit screw marked "L" clockwise until the rear derailleur stops moving towards the spokes and can neither be moved by actuating the shift lever nor by pushing it with your hand.

This adjustment prevents the chain from getting stuck between sprocket and spokes or the rear derailleur or the derailleur cage from touching the spokes, which could result in damage to the spokes, the rear derailleur and the frame. In the worst case, it could be impossible to continue cycling.



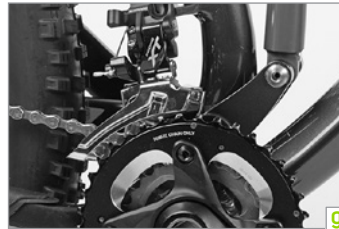
If your MERIDA bike has tipped over or the rear derailleur received a blow, the rear derailleur or its mount, also referred to as the derailleur hanger, might be bent. It is advisable to check its range of movement and readjust the limit screws (e), if necessary, after such an incident or after mounting a new rear wheel on your bike.



Be sure to do a test ride in an unfrequented place after adjusting the gears.



Let your MERIDA dealer maintain and service your MERIDA bike regularly.



Adjusting the front derailleur

The range within which the front derailleur keeps the chain on the chainwheel without itself touching the chain is very small. The movement range is reduced in the same way as with the rear derailleur, i.e. by turning the limit screws (f) marked "H" and "L". The limit screws are adjusted by your MERIDA dealer. They do not alter their position during normal use.

As with the rear derailleur, the cable of the front derailleur (g) is subject to lengthening which leads to a reduced precision in gear changing. If necessary, shift to the small chainwheel and increase the tension of the Bowden cable by turning the adjusting bolt through which it passes at the entry to the gear shifter (h).



Always check after an accident whether the guide plates of the front derailleur are still parallel to the chainwheels. Make sure they do not touch the large chainwheel which would block the drive. Risk of an accident!



Adjusting the front derailleur is a very delicate job. Improper adjustment can cause the chain to jump off, thus interrupting the power train. This can cause an accident!



Be sure to do a test ride in an unfrequented place after adjusting the gears.

Multi-speed hubs (internal gear hubs)

Functioning and operation

The advantages of multi-speed hubs **(a+b)** are their enclosed design. Unlike derailleur gears the gear drive is within the hub body, only the primary ratio from the chainwheel to the sprocket being outside. What is more, all the gears can be shifted through with one gear shifter.

Provided that it is serviced regularly, the drive chain has a comparatively longer service life. And this applies even more if it is protected from the influences of the weather by a sealed chain box.

With multi-speed hubs normally the power transmission and the gear ratio adjustment is guaranteed via one or several planetary gears, depending on the number of gears. To shift gears the pedal force should be reduced shortly.

In contrast to derailleur gears, multi-speed hubs cannot only be combined with manually actuated brakes (rim, drum, roller or disc brakes), but also with back-pedal brakes (roller or drum brakes) that are actuated by a reverse rotation of the pedals. The most effective braking is achieved with the pedals in the horizontal position.



a



b



c



d

In the case of **multi-speed hubs** and **gearbox shift systems** “1” stands for the first, lowest gear. The gears are shifted through one after the other, if possible without turning the pedals, at least, however, at reduced pedal pressure. The highest number stands for the highest gear.

NuVinci gear hubs (c) are designed to allow stepless shifting by means of a twist grip within their range of gear ratio. With the NuVinci hub the force transmission is ensured by balls instead of toothed wheels. Make it a rule to shift only while pedaling at reduced force.

With NuVinci the actual gear ratio is indicated to the cyclist on the display **(d)**. If the cyclist climbs uphill, the gear ratio is low, on level ground the gear ratio is high.

The **H-Sync** gear system integrates the **NuVinci Harmony®** gear hubs into the Intuvia system of its Bosch drive. With H-Sync you can predefine your preferred cadence (between 30 and 80 turns per minute). The drive readjusts automatically – both uphill as well as downhill. This allows you to always maintain your preset cadence.

For more information see the instructions of the component manufacturers on this MERIDA CD-ROM.



Always make sure changing gears makes as little noise as possible and is absolutely jerk free.



Make yourself familiar with the operation of your gears in a place free of traffic and practice operating the shifters or the twist grips as well as the brake system, before using your bike on public roads.



There are some multi-speed hubs where the effects of the back-pedal brake depend from the selected gear. Read the gear manufacturer's operating instructions on this MERIDA CD-ROM carefully and make yourself familiar with the brake function before using your bike on public roads.

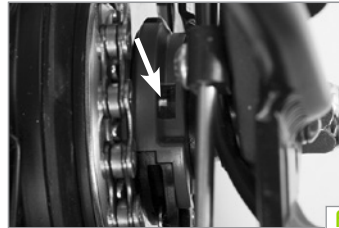
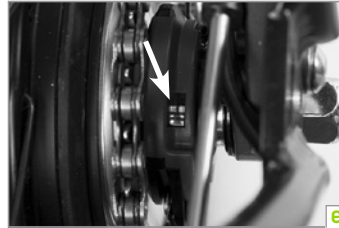


Removing and mounting the wheels is not the same as with derailleurs gears. With this fact in mind read the chapter "Tire puncture" and observe the notes given in the operating instructions of the manufacturer on this MERIDA CD-ROM.

Checking, readjusting and servicing

Multi-speed hubs require only little maintenance and need not be adjusted very often. Check the chain tension, in particular when removing and mounting wheels, and read the chapter "Chain - Care and wear".

If the indexed gear change does not work trouble-free, then contact your MERIDA dealer.



Adjusting multi-speed hubs

Shift into the fourth (4th) gear. Look from above at the right-hand side of the hub (e+f). There you can see two yellow markings. These two markings must be at the same height, i.e. they must produce a line.

Turn the adjusting screw at the shifter (g) until you get just one single line.



Regularly check the reliable fit of the bolted connection of the hub and, if necessary, of the torque arm at the frame.



Shimano recommends e.g. regular maintenance (oil change) every 5,000 km or every two years. Read the operating instructions of the gear manufacturer on this MERIDA CD-ROM or contact your MERIDA dealer.



Observe the operating instructions of the gear manufacturer on this MERIDA CD-ROM. If you are in doubt or if you have any questions, contact your MERIDA dealer.

Chain - Care and wear

Regular and correct lubrication of your bike's chain makes for enjoyable riding and prolongs its service life. It is not the quantity, but the distribution and regular application of lubricant that counts. Clean the dirt and oil off your chain with a slightly oily rag from time to time **(a)**. Special degreasers are not necessary; they even have a damaging effect.

Having cleaned the chain as thoroughly as possible, apply chain oil, wax or grease **(b)** to the chain links. To lubricate the chain, drip the lubricant onto the rollers of the lower run of the chain while you turn the crank. Once this is done, turn the cranks a few more times; then let your MERIDA bike rest for a few minutes so that the lubricant can disperse. Finally wipe off excess lubricant with a rag so that it does not spatter around during riding or can collect road dirt.



Make sure the braking surfaces of the rims, the rotors and the brake pads remain clear of lubricants, as the brakes will fail otherwise!



For the sake of the environment, only use biodegradable lubricants. Bear in mind that some of the lubricant can end up on the ground, especially in wet conditions.



Chain maintenance

Although the chain is one of the wearing components of your MERIDA bike, there are still ways for you to prolong its life. Make sure the chain is lubricated regularly, especially after riding in the rain. Try to only use gears which run the chain in the straightest line between the sprockets and chainwheels and get in the habit of high cadence pedaling.

The chains of bikes with derailleur gears are worn out after approx. 1,000 to 3,500 km or 50 to 125 hours of use. Heavily stretched chains impair the operation of derailleur gears. Cycling with a worn-out chain also accelerates the wear of the sprockets and chainwheels. Replacing these components is relatively expensive compared with the costs of a new chain. It is therefore advisable to check the condition of the chain at regular intervals.

Your MERIDA dealer has accurate measuring instruments to check the chain wear **(c)**. Replacing the chain should ideally be left to an expert, as this requires special tools. In addition, you need to select a chain matching your gear system.



An improperly riveted or heavily worn chain can break and throw you off your bike.



When replacing your chain, only use appropriate and suitable original spare parts **(d). Your MERIDA dealer will be pleased to help you.**

The wheels and the tires

The wheel consists of the hub, the spokes and the rim. The tire is mounted onto the rim so that it encases the tube in the case of the most common system, i.e. the clincher or folding tires. There is a rim tape running around the rim well (e) to protect the sensitive tube against the edges of the rim trough, which are often sharp.

Another common system comprises tubeless tires which require specific rims without boreholes and firmly screwed valves. In addition, there are in rare cases tubular tires which are glued on specific rims.

The wheels are subjected to considerable stress through the weight of the rider and any carried baggage as well as through bumpy road surfaces and terrain. Although wheels are manufactured with great care and delivered accurately trued, spokes and nipples can lose a little tension on the first kilometers. Ask your MERIDA dealer to check and true up the wheels after you have bedded them in over about 100 to 300 kilometers or 5 to 15 hours of use.

After the bedding-in period, check the wheels regularly. It will, however, rarely be necessary to tighten the spokes (f).



Poorly glued tubulars can make the tire come off the rim. Risk of an accident!



Truing (retruing) wheels is a difficult job which you should definitely leave to your MERIDA dealer.



Tubular tires will not be considered any further in the following. Read the operating instructions of the rim manufacturer, the tire producer and the glue supplier and ask your MERIDA dealer for advice.

Tires, inner tubes, rim tape, inflation pressure

The tires should provide grip and traction. At the same time they should run smooth and enhance the rider's comfort by absorbing small shocks. Both the rolling friction and the grip depend on the nature of the tire carcass, the rubber compound and the tire tread. Your MERIDA dealer would be glad to help you choose from the numerous types of tires (g).

If you want to mount a new tire, you need to mind the sizing system and the actual size of the old tire. The latter is specified in two different units on the side of the tire. One of the sizes is the standardized size in millimeters which is more precise, e.g. the number sequence 57-622 means that the tire is 57 mm in width when fully inflated and has an inner tire diameter of 622 millimeters. The other size is indicated in inches (e.g. 29x2.25") (h).

The tires must be inflated to the proper inflation pressure to provide an optimal compromise between smooth running and riding comfort. Properly inflated tires are also more resistant to punctures. An insufficiently inflated tire can easily get pinched (“snakebite”), when it goes over a sharp kerb.

The air pressure recommended by the manufacturer is given on the tire side or on the type label (a). The lower of the two pressure specifications makes for better cushioning for lightweight riders and is therefore best for cycling on a rough surface. Rolling resistance on level ground decreases with growing pressure, but so does comfort. Highly inflated tires are therefore most suitable for heavy riders and for riding on tarred roads. Therefore, adjust the pressure to your weight and your riding habits.

Inflation pressure is often given in the old system of units, i.e. in psi (pounds per square inch). The table (b) gives the most common pressure values in terms of both systems.

Clincher and folding tires and rim alone are not able to hold the air. Therefore, an inner tube has to be placed inside the tire to retain the air pressure.

The rims of clincher and folding tires require, in general, a high-value rim tape. This rim tape protects the inner tube from the braking heat which could make the tire burst.



psi	bar	kPa
80	5.5	550
90	6.2	620
100	6.9	690
110	7.6	760
120	8.3	830
130	9.0	900
140	9.7	970



Replace tires with a worn tread or with brittle or frayed sides. Dampness and dirt penetrating the tire can cause damage to its inner structure. The tube might burst. Risk of an accident!



If you mount a new tire with another size than the standard tire mounted, it might be possible that the clearance between the front of your shoe and the wheel will be reduced when you ride at reduced speed. Risk of an accident!



Treat your tires with care. Always ride your bike with the prescribed tire pressure and check the pressure at regular intervals, at least once a week (c). Riding with too low or too high air pressure may make the tire come off the rim or burst.



Clincher and folding tires allowing an inflation pressure of five bars or more have to be mounted on hook bead rims, identifiable by the designation “C”.



Observe the maximum pressure value of the rim. The pressure is dependent on the tire width. You can find the values in the operating instructions of the rim or wheel manufacturer on this MERIDA CD-ROM.



Please note that a pedelec weighs more and that your usual tire pressure may be insufficient. A higher pressure gives a better riding stability and reduces the risk of a puncture. The minimum and maximum pressure (in bar or PSI) is indicated on the tire side.

Valves

There are two valve types in general use on mountain and cross bikes:

1. **Sclaverand or Presta valve (d)**: This valve is nowadays used on almost all types of bikes. It is designed to withstand extremely high pressures.
2. **Schrader or American valve (e)**: This is an adapted car tire valve.

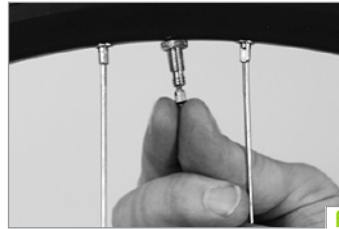
All valve types come with a plastic cap to protect them from dirt.

The **Schrader valve** can be inflated with a suitable pump directly after removing the protective cap.

With **Presta valves** you first have to undo the small knurled nut a little and depress it carefully until air starts to escape. Check the valve core is tightened and seated in its stem, otherwise air may slowly leak out. Do not forget to tighten by hand the valve nut after inflating.

Tires with **Schrader valves** can conveniently be inflated at car filling stations with a compressed air dispenser. The same applies to Presta valves fitted with a special adapter. A compressed air dispenser must be used very carefully in short bursts as you may otherwise overinflate the tire and make it burst. To let out air, press the needle in the center of the Schrader valve or the knurled nut of the Presta valve (f).

It can be hard to inflate tires to the necessary pressure by using hand pumps. It is much easier with a track pump equipped with a pressure gauge (g).



Rim trueness and spoke tension

For the true running of the wheel it is imperative that the tension exerted by the spokes is distributed evenly around the rim. If the tension of a single spoke changes, e.g. as a result of riding fast over a kerb or of a loose nipple, the tensile forces acting on the rim become unbalanced and the wheel will no longer run true. The functioning of your MERIDA bike may even be impaired before you notice the wobbling appearance of a wheel that has gone out of true.

With rim brakes the sides of the rims also serve as braking surfaces. An untrue wheel can impair your braking effect. It is therefore advisable to check the wheels for trueness from time to time. For this purpose lift the wheel off the ground and spin it with your hand. Watch the gap between the rim and the brake pads. If the gap varies by one millimeter or more, you should ask your MERIDA dealer to true up the wheel (h).



Do not ride with untrue wheels. In the case of extreme side-to-side wobbles, the brake pads of rim brakes can miss the rim and get caught in the spokes! This normally instantly jams the wheel and throws you off your bike.



Loose spokes must be tightened at once. Otherwise the load on the other spokes and the rim will increase.



Truing (retruing) wheels is a difficult job which you should definitely leave to your MERIDA dealer.

Tire puncture

Flat tires are the most common cause of puncture during cycling. However, as long as you have the necessary tools and a spare tube or a repair kit, this need not mean the end of your cycle ride. If your wheels are attached with quick-releases to the frame and the fork, you only need two tire levers and a pump **(a)**.



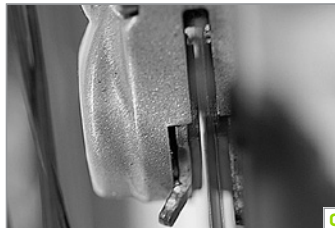
i Before removing a wheel, read the chapters “Mounting wheels” and “How to use quick-releases and thru axles”. If you are in doubt or if you have any questions, contact your MERIDA dealer.

Dismounting wheels

If your bike has mechanical rim brakes (**cantilever and V-brakes**) you first have to unhook the brake cable from the brake arm **(b)**. To do this, grip the rim with one hand and press the brake pads and/or arms together. In this position the usually barrel shaped nipple of the lateral brake cable or the brake hose (of V-brakes) can easily be disengaged.



If you have **disc brakes** (hydraulic or mechanic), check the position of the brake pads through the inspection window **(c)**. In this way you will be able to tell later whether the brake pad is still in its proper position. Read the operating instructions of the brake manufacturer on this MERIDA CD-ROM.



If you have derailleurs gears, you should shift the chain to the smallest sprocket before removing the rear wheel. This shifts the rear derailleur right to the outside where



it doesn't interfere with the removal of the wheel. Open the quick-release of the wheel, as described in the chapter “How to use quick-releases and thru axles”.

If you cannot remove the front wheel after releasing the lever, this is due to the drop-out safety tabs. They come as metal catches which engage with recesses in the drop-outs. Just release the quick-release adjusting nut a little and slip the wheel past the tabs. You will find it easier to remove the rear wheel, when you pull the rear derailleur slightly backwards **(d)**. Lift your MERIDA bike a little off the ground and give the wheel a light blow with your hand so that it drops out.



Rotors can become hot, so let them cool down before removing a wheel.



If you purchased a MERIDA bike with hydraulic disc brakes, never turn your MERIDA bike upside down for repair work, i.e. with the handlebars and saddle underneath, as the brakes will fail otherwise.



Never pull the (disc) brake lever while a wheel is removed and always make sure that you fit the safety locks **(e) before removing the wheel.**



Observe the instructions of the brake and gear manufacturers on this MERIDA CD-ROM.

Clincher and folding tires

Dismounting tires

Remove the cap and the fastening nut off the valve and deflate the tire completely (f). Press both tire sides from the rim side towards the center of the rim. This will ease the removal.



Apply a plastic tire lever to one bead of the tire about 5 cm beside the valve and lever the tire out of the rim in this area (g). Hold the tire lever fast in its position. Slip the second tire lever between rim and tire at a distance of about 10 cm on the other side of the valve and lever the next portion of the bead there over the edge of the rim.



After levering a part of the tire bead over the edge of the rim you should normally be able to slip off the whole tire on one side by moving the tire lever around the whole circumference. Now you can remove the inner tube. Make sure the valve does not get caught in the rim, as this can damage the inner tube. If necessary you can remove the whole tire by pulling the other tire bead off the rim.



Repair the puncture according to the instructions of the repair kit manufacturer or replace the inner tube.

When you have removed the tire, you should also check the rim tape (h). It should lie squarely in the rim trough, covering all spoke nipples, and should neither be damaged nor brittle.



In the case of double wall rims the tape must cover the entire rim base, but it should not be so broad as to stand up along the inside edges of the rim trough. Rim tapes for this type of rim should only be made of fabric or durable plastic. If you are in doubt or if you have any questions, contact your MERIDA dealer.



If the fabric of the tire is destroyed by the perforating object, replace the tire to be on the safe side.



Replace spoilt rim tapes immediately.



If you get a puncture en route, inflate the inner tube and bring it close to your ear. In most cases you can hear the air coming out. At home you can help yourself with a bucket of water where you can locate the hole by the bubbles. When you have found the hole, look for the corresponding place on the tire and check it, as well. Often you will find the foreign body sticking in the tire. Otherwise another puncture can occur.

Mounting tires

When mounting a tire make sure that no foreign matter such as dirt or sand gets inside the tire and that you do not damage the inner tube in the process.

Slip one bead of the tire onto the rim. Using your thumbs, press one bead over the edge of the rim and then around the entire circumference. This should normally be possible without using tools.

Stick the valve of the inner tube through the hole in the rim **(a)**. Inflate the inner tube slightly so that it becomes round and push it into the tire all the way round. Make sure not to leave any folds in the inner tube.

To finish mounting the tire, start at the opposite side of the valve. Using your thumbs, press as much of the second bead of the tire over the edge of the rim as you can.

Make sure the inner tube does not get pinched and squashed between the tire and the rim. You can prevent this by pushing the inner tube into the hollow of the tire with a finger as you work along **(b)**.

Work the tire into the rim by approaching the valve symmetrically from both sides. Towards the end, you will have to pull the tire vigorously downwards **(c)** to make the already mounted portion of the tire slip towards the deepest part of the rim well. This will ease the job noticeably on the last centimeters.



a



b



c



d

Before fitting the tire completely on the rim check again whether the inner tube lies properly inside the tire and press the last stretch of tire over the edge of the rim using the balls of your thumbs.

If this does not work, you will have to use the tire levers **(d)**. Make sure that the bent ends point towards the inner tube and that the inner tube does not get damaged.

Push the valve subsequently a little into the tire **(e)** so that the inner tube does not get caught between the rim and the tire beads. Check whether the valve stands upright. If not, dismount one bead again and reposition the inner tube.

To make sure the inner tube does not get pinched between the rim and the tire beads, move it sideways back and forth between the sides of the rim. While doing so, also check whether the rim tape has shifted.

Inflate the tube to the desired pressure. The maximum pressure is indicated on the side of the tire.

Check whether the tire is properly seated by inspecting the fine witness line **(f)** on the tire just above the rim edge. This line should be even to the rim all around the tire. If it is not, deflate the tire a little and check again. Starting from the maximum tire pressure you can now reduce the pressure through the valve to suit your needs. Please observe the recommended tire pressure range **(g)**.

Tubeless tires (UST tires)

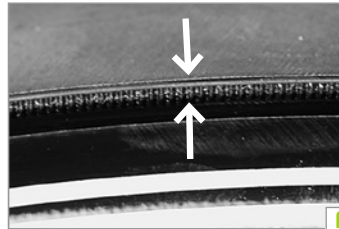
Dismounting tires

Deflate the tubeless/UST tire completely (h). Press the tire from one side towards the center of the rim, until the tire bead is loose in the rim base. Lever this tire side completely over the rim side or the rim edge and start on the side opposite of the valve. Do not use tire levers to prevent any damage of the sensitive sealing lip on the tire bead! Press the other tire side into the rim base and remove it from the rim only when the entire tire side is pulled over the edge of the rim.

Repair

In case of a puncture, tubeless tires can also be used with inner tubes. First remove the perforating object, as far as available, from the tire and remove the valve from the rim. Insert a slightly inflated new inner tube into the tire. Mount the tire as described below.

For tubeless tires there are special patches which are mounted on the inner side. If necessary, you can also use a conventional repair patch. Observe in any case the operating instructions of the repair kit manufacturer.



Improper mounting can lead to malfunctioning or tire damage. Therefore, it is essential to follow the instructions of the component manufacturer on this MERIDA CD-ROM.

Mounting tires

Before mounting a tire make sure it is free of dirt and lubricant on the inside and around the tire bead. Do not use tire levers! To prevent any damage, wet both tire beads all around with soapy water or with tire mounting lubricant – or at least with water – and press the tire with your hands onto the rim, as you do in the case of clincher and folding tires.

Start by levering one tire bead completely over one rim edge and then the other. Press both tire beads all the way around into the well of the rim and ensure that the special valve is centered between the tire beads.

Press onto the tire from above over the entire circumference of the tire.

Pump up the tire with a compressor or a CO2 cartridge up to its maximum air pressure so that it can seat properly on the rim. The permissible pressure is normally shown on the side wall of the tire. Loud plopping noises can be heard during the seating process. Do not be worried!

Check whether the tire is properly seated by inspecting the fine witness line on the tire just above the rim edge. This line should be even to the rim all around the tire.

Starting from the maximum tire pressure you can now reduce the pressure through the valve to suit your needs. Please observe the recommended tire pressure range.



Tubeless tires may only be mounted on a UST rim or wheel (Mavic and other manufacturers).

Mounting wheels

To mount a wheel follow the reverse procedure of wheel dismounting. Make sure the wheel is correctly seated in the drop-outs and accurately centered between the fork legs (a) or the rear and chainstays. Make sure the quick-release (b) and the drop-out safety tabs are correctly seated. For more information see the chapter “How to use quick-releases and thru axles”.

If you have cantilever brakes hook up the brake cable at the brake arm (c). To do this, grip the rim with one hand and press the brake pads and/or the brake arms together. In this position the usually barrel shaped nipple can easily be engaged.



If you have disc brakes, check before mounting the wheel whether the brake pads rest snugly in their seats in the brake caliper body. The gaps between the brake pads and the wheel should be parallel and the wear indicators in their correct position.

Make sure that you push the brake disk between the brake pads. After mounting the wheel and tightening the quick-release, pull the brake lever (several times, if you have disc brakes).

If your bike has a multi-speed hub, verify the proper assembly of the individual components and tension the chain before tightening the wheel nuts by pulling the wheel backwards. Verify that the amount of play midway between sprockets and chainwheel is not more than two centimeters. Make sure there is no excessive chain slack!

After mounting the wheel and tightening the quick-release, pull the brake lever (several times, if you have disc brakes) (d). To do so lift your MERIDA bike off the ground and spin the wheel with your hand. With the wheel spinning the rotor should not drag along the brake caliper or the brake pads and the rim should keep off the (rim) brake pads.



Immediately put back the brake cable of rim brakes after having mounted the wheel!



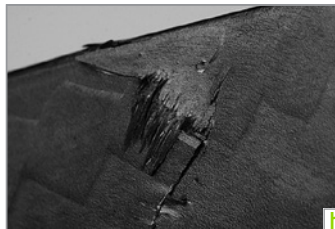
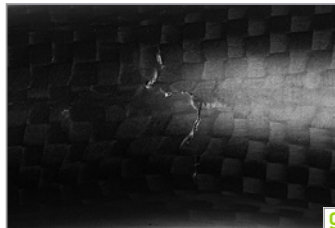
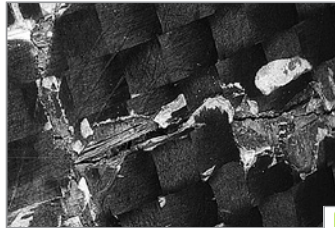
Remount the brake caliper of hydraulic rim brakes immediately and close the quick-release! Make sure that the brake caliper does not touch either the rim or the tire or the spokes when the wheel turns.



Before setting off again check that the brake surfaces and/or rotors are still free of grease or other lubricants after the wheel mounting.



Check whether the brake pads hit the rotors or brake surfaces of the rims. Check the seating of the wheel attachment. Always do a brake test as described in the chapter "Before every ride"!



Special characteristics of carbon

Special characteristics of components made of carbon-fiber-reinforced plastics, also referred to as carbon or CRP, need to be taken into account.

Carbon (e) is an extremely strong material which combines high resistance with low weight. After overstress, however, carbon components, unlike metal parts, do not necessarily show durable or visible deformation even though some of the fibers may be damaged.

It is very dangerous to continue using the carbon component after an impact or undue stress, as it may fail without previous warning thereby causing an accident with unforeseeable consequences. For this reason we recommend that you have the component, or to be certain, the entire MERIDA bike checked by your MERIDA dealer after every incident, such as e.g. a crash.

Replace a damaged component (f-h) at once! Prevent further use by taking appropriate measures, e.g. saw the component into pieces. Damaged carbon frames can possibly be repaired. Contact your MERIDA dealer.

Carbon components must not be exposed to excessive heat. Therefore, never have a carbon component enameled or powder-coated. The temperatures required for enameling or powder-coating could destroy the component. Do not leave carbon fiber components near a source of heat or in your car during hot or sunny weather.

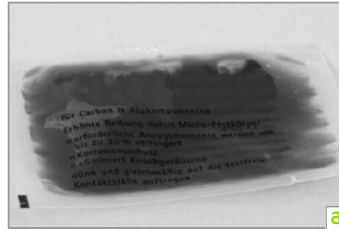
Carbon components have, like all lightweight bike components, a limited service life. For this reason, have the stem and the handlebars checked at regular intervals (e.g. every three years), even if they have not experienced any undue stress, such as an accident.

When you intend to transport your MERIDA bike in the boot of your car, be sure to protect the bike or the carbon frame and components. Blankets, foam tubes or the like are a suitable padding to protect the sensitive material from damage. Do not place any bags on your MERIDA bike lying in your car.

Always park your MERIDA bike carefully and make sure it does not topple over. Carbon frames and components may already sustain damage by simply toppling over and thereby hitting e.g. a sharp edge.



If carbon components on your MERIDA bike produce any creaking or cracking noises or show any external sign of damage, such as gouges, cracks, dents, discolorations etc., do not use the MERIDA bike any longer. Contact your MERIDA dealer immediately; he will check the component thoroughly.



a



b



c



d



Do not combine carbon handlebars with bar ends, unless they are specifically approved. Do not shorten carbon handlebars or clamp the brake levers and shifters more in the middle than indicated or needed. Risk of breakage!



Make sure all carbon clamping areas are absolutely free of grease and other lubricants! Grease will penetrate the surface of the carbon material, thereby reducing the coefficient of friction. This will no longer provide reliable clamping within the prescribed torque values. Once greased, carbon components may never again ensure reliable clamping! Use a special carbon assembly paste (a) instead as offered by various manufacturers.



Most clamps of bike carrier systems are potential sources of damage to large-diameter frame tubes! As a result thereof carbon frames can fail during use without previous warning. However, there are special-purpose models which are suitable, available in the car accessory trade. Inform yourself there or ask your MERIDA dealer for advice.



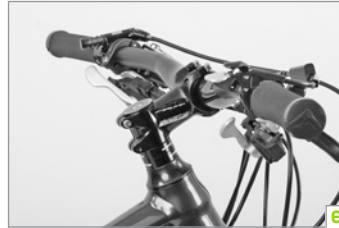
Do not clamp a carbon frame or seat post in the holding jaws of a workstand! The components may sustain damage. Mount a sturdy (aluminum) seat post (b) instead and use it to clamp the frame, or chose a work stand that holds the frame at three points inside the frame triangle or that clamps the fork and bottom bracket shell.



Protect the exposed areas of your carbon frame (e.g. the head tube and the underside of the down tube) against rubbing cables or stone chips with special pads (c+d) your MERIDA dealer keeps for sale.



Carbon fiber components are particularly vulnerable to damage caused by excessive clamping force. Carbon assembly paste creates extra friction between two surfaces, allowing the necessary torque value to be reduced by up to 30 %. This is especially useful in the clamping areas of handlebars and stem, steerer tube and stem and seat post and stem, i.e. three areas where too much clamping force can damage either component, causing component failure or voiding the warranty. By reducing the clamping force, carbon assembly paste relieves stress on sensitive carbon surfaces, preventing damage to fibers or the cracking of the carbon substructure.



Headset

The headset (e) connects the fork to the frame, but allows it to move freely. It must afford virtually no resistance to moving, if your MERIDA bike is to go straight, stabilizing itself as it runs. The shocks caused by uneven road surfaces expose the headset to considerable levels of stress. In this way it can become loose and maladjusted.



Riding the bike with a loose headset greatly increases the stress on the fork and the bearings. This can lead to damage to the fork. Risk of an accident!

Checking and readjusting

Check the headset for play by placing your fingers around the upper head tube race (f).

Bring your weight to bear on the saddle, pull the front brakes with your other hand and push the MERIDA bike firmly back and forth with the wheel remaining on the ground. If the bearing has play, you will feel the upper head tube race moving in jerks relative to the lower head tube race - visible as a small gap in between the head tube races (g).

To check the bearing for ease of running, lift the frame until the front wheel is suspended in the air (h). The handlebars should turn from far left to far right without feeling roughness or tightness at any point. With a gentle tap on the handlebars the fork should turn easily from the middle position.

If you face any problems during the test, contact your MERIDA dealer.



Adjusting the headset requires a certain amount of experience and should therefore be left to your MERIDA dealer.

Threadless headsets – Aheadset®

This headset system is characterized by the fact that the stem is not in the fork steerer tube but clamps it from outside. Hence the stem is an important constituent part of the headset, clamping it therefore also sets the adjustment. You generally only need one or two Allen keys and a torque wrench to adjust an Aheadset®.

Release the clamping bolt(s) located on the side of the stem by one to two turns (a). Gently tighten the counter-sunk adjusting bolt on top a little, e.g. by a quarter turn (b), by using an Allen key.

Align the stem so that the handlebars are not slanted. Make sure the front wheel is in line with the top tube and the stem. Tighten up the stem clamping screws. Use a torque wrench and never exceed the maximum torque values! You will find the prescribed values in the chapter “Recommended torque settings”, directly on the components and/or in the operating instructions of the component manufacturers on this MERIDA CD-ROM.



Check the headset for play as described above (c). Take care not to tighten the bearing too much, as this could easily destroy it.



Bear in mind that by overtightening the bolts the stem can crush the steerer tube. In particular, models with a carbon fork steerer tube react very sensitively to overloading as a result of overtightening the shaft clamp at the stem. Risk of breakage! Make sure the clamping area is absolutely free of grease when any of the clamping faces is made of carbon. If, necessary, use carbon assembly paste in the clamping areas to ensure maximum clamping.



Check the secure seat of the stem by taking the front wheel between your legs and trying to turn the handlebars and stem relative to the wheel (d). A loose stem can cause bad accidents.



Never change the preloading mechanism in the inside of the fork steerer tube. Never install a star nut in carbon fork steerer tubes.



Do not overtighten the upper bolt, it only serves to adjust the headset play.



There can be several reasons why the bearings cannot be adjusted. If you are not absolutely sure, ask your MERIDA dealer for help.

Suspension

Glossary

Suspension forks

Bicycle fork **(e)** absorbing and damping shocks through moving components. The most common among these forks are the telescopic suspension forks. What is designated as stanchion tubes are the thinner tubes press fitted or screwed to the fork crown of a telescopic fork. What is designated as lower leg are the lower tubes in which the stanchion tubes slide in.

Rear shock

The rear shock **(f)** is the element combining the spring as well as the damping in the rear frame of a full suspension bike. Often the rear shock is also designated as shock absorber.

Spring rate or hardness

The force that is required to compress the spring by a certain suspension travel – measured in Newton per millimeter (N/mm) or pound per inch (lbs/in). A higher spring rate requires more force for the travel. In pneumatic spring elements this corresponds to a higher pressure.



Spring preload

In the case of the widespread air suspension systems, the air pressure in the fork **(g)** is crucial for the spring rate and the spring preload. Observe the recommendations of the manufacturers. Within a certain range a preload can be applied to the coil springs. Then the suspension only reacts when a greater load is applied. However, the spring rates are not changed as a result. Heavy riders cannot compensate a too low spring rate with a higher preload.

Negative suspension travel (“sag”)

The suspension travel that is taken up by the rear structure or the fork when the rider takes up his or her usual riding position at a standstill. This is usually specified as a percentage of the overall suspension travel.

Suspension travel adjust

In most case the suspension travel of the suspension fork is reduced by turning a knob. There are some forks where the reduction is only realized after a deep spring compression. In the case of full suspension rear frames this is typically done by screwing off segments on which the rear shock is mounted or by loosening or readjusting screws.

Compression damping **(h)**

In most cases a blue adjusting knob. Delays or brakes the initial compression. Prevents the suspension fork from bottoming out when compensating very fast impacts. Especially high-quality suspension elements distinguish between “high speed” (for hard impacts = rapid spring compression) and “low speed” (for slow compression, e.g. bouncing when riding out of the saddle) compression damping.

Rebound damping (a)

In most cases a red adjusting knob.
Delays or brakes the rebound. Prevents bike bobbing.

Lockout (b)

In most cases a lever on the suspension element or the handlebars.

A device to block the fork or the rear shock so that the suspension element does not cause bob when riding on tarred roads or smooth surfaces. Not to be used off road.

Platform damping (c)

Increases the (low speed) compression damping rate and suppresses bobbing. As opposed to the lockout function, the suspension is not blocked completely.



a



b



c



d

Suspension forks

Most mountain bikes and pedelecs are equipped with suspension forks (d). This feature gives you better control of your bike when riding cross-country or on rough road surfaces and ensures more ground contact for the tire. It noticeably reduces the strain on you and your bike caused by the mechanical shocks from the terrain.

Suspension forks differ in their types of spring elements and damping. Suspension forks normally work with air spring elements or less often with coil springs. Damping is usually done by oil.



Suspension fork manufacturers normally include instructions with their deliveries. Read them carefully before changing any settings or doing any maintenance work on your suspension fork. You can find the instruction of the suspension fork manufacturer on this MERIDA CD-ROM.



Also observe the suspension glossary at the beginning of this chapter.

Adjusting the spring rate

To work perfectly, the suspension fork has to be adjusted to the weight of the rider, the sitting posture and the intended use. Be sure to have this adjustment carried out by your MERIDA dealer at the time of delivery.

Note in general that the suspension fork must give in a little even when you are just sitting on the bike – this is the so-called negative suspension travel or sag (e).

If you ride over a pothole the spring is decompressed and the suspension fork compensates for the unevenness. If the air pressure or the spring preload is too high, this effect is lost because the suspension fork is already fully extended. This means that an important comfort and safety factor is lost if the tire briefly loses contact with the ground.

In general, cross-country and marathon racers prefer a shorter negative suspension travel (sag), freeriders or downhillers riding often in rough terrain prefer a longer one. In the case of cross-country and marathon bikes the suspension fork should yield by 15-25 % of the maximum suspension travel, in the case of all mountain, enduro and freeride bikes by 25-35 %.

To measure the travel you can use the rubber ring mainly located on the thinner, plunging tube of the suspension fork. If there is no rubber ring, tie up a cable tie around one of the stanchion tubes. Make sure it is not too tight, you should still be able to move it, it should however not slip by itself.



e



f



g



h

Put on your usual riding clothing (including if necessary a packed rucksack), sit on your bike and bring yourself into the usual riding position. Lean against a fixed object (railings, wall etc.) and make sure you do not fall over. Ask a helper to move the rubber ring or the cable tie downwards against the dust seal at the lower leg (f).

Get off your bike so that the fork does not compress any more. The distance between the rubber ring/cable tie and the wiper is the negative suspension travel, or sag (g). Compare it against the total suspension travel (as specified by the manufacturer) to determine whether the suspension should be set to be harder or softer.

With pneumatic suspension forks the spring rate is set by the air pressure in the fork. The pressure must be set before the first ride by means of a special high-pressure pump with pressure gauge (h) and modified later as required due to changes in the weight of the rider and/or load.

Note the appropriate setting values and check them subsequently at regular intervals. Always follow the recommendations of the manufacturer and never exceed the maximum air pressure for the suspension fork. Always make a test ride after each change to the settings.

In the case of most suspension forks with coil springs a preload can be applied to the springs within tight limits by turning a knob at the top of the fork crown (a). If that is not possible and the desired negative suspension travel ("sag") cannot be set, the coil springs must be replaced by harder or softer models. The replacement is a job for the MERIDA dealer.



a

When replacing any parts, be sure to only use parts that bear the appropriate mark and, to be on the safe side, original spare parts. Your MERIDA dealer will be pleased to help you.

Always make a test ride over terrain with various surfaces (b-d) after each change to the settings. Check afterwards the position of the rubber ring/cable tie. Its distance from the wiper is the maximum suspension travel that you have used. If the rubber ring/cable tie has moved by even a few millimeters, the setting of the forks is too hard. Reduce the pressure, or, in the case of coil springs, the spring preload. If that brings no improvement, have the springs replaced.



b



c

If the rubber ring/cable tie has shifted over the entire length of the tube or if the fork audibly bottoms out and hits the top repeatedly when riding off-road or on bad roads, the setting of the springs is too soft. In the case of air-suspension forks the pressure must be increased. In the case of steel coils, have them replaced by your MERIDA dealer.



d



Suspension forks are designed in a way to absorb shocks. If the fork is too rigid and jammed, the terrain-induced shocks pass in the case of some suspension forks directly into the frame without any damping. The frame is normally not designed to withstand such undamped stresses. If your suspension has a lockout mechanism, do not activate the lockout function when riding in rough terrain, but only when riding over smooth terrain (roads, field tracks).



The suspension fork should be set up and adjusted in a way that it does not reach the end of its travel, i.e. bottoms out, unless in extreme cases. A spring rate which is too soft (too low air pressure) can usually be heard or felt as a "clunk" type noise. This noise is caused by the sudden complete compression of the suspension fork as it reaches bottom out. If the suspension fork frequently reaches bottom out, it will fail over time, and so will the frame.



In case of inquiries, contact your MERIDA dealer or follow the respective instructions in the operating instructions of the suspension fork manufacturer on this MERIDA CD-ROM.

Readjusting the suspension travel

Normally, you cycle with the maximum suspension travel of your suspension fork. This provides maximum cycle fun and utmost control over the mountain bike.

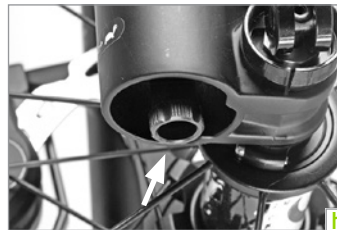
When climbing steeper hills the suspension travel can be limited by readjusting the suspension travel; the cockpit of your bike is then a little bit lower. Make use of this lowering device mounted on your fork to sit in a more flat position when climbing hills. In this position the risk of overturning rearward is reduced.

Turn the “travel” or “travel adjust” **(e)** knob on your fork in the indicated direction of rotation. Most forks are marked either with plus (“+”) **(f)** and minus (“-”) **(g)** indications or actual millimeter values for the suspension travel.

There are some forks where the reduction is only realized after a deep spring compression. To activate the system lean over the handlebars and press down the suspension fork forcefully once.

On level ground and in particular downhill you have to set back the adjustment of the fork so that you can use the suspension travel to the full.

Turn the knob in the opposite direction. If necessary, lean again over the handlebars and compress the fork deeply so that the full travel is reactivated.



Do not ride with reduced suspension travel in rough terrain and in particular not downhill!



For more information on readjusting the suspension travel, see the operating instructions of the suspension fork manufacturer on this MERIDA CD-ROM.

Adjusting the damping

The damping is adjusted by valves inside. When the oil is forced through these valves this slows down the speed with which the suspension fork is extended or compressed and prevents the suspension “bouncing” after hitting an obstacle. This is how the reaction to obstacles can be optimized.

Suspension forks with adjustable **rebound damping** have an adjusting knob (mostly red) to slow down or accelerate the rebound movement **(h)**. If a second (mostly blue) knob is available, the compression speed can be set and/or the lockout function can be activated.

Start the setting with a completely open damping (rebound and compression on “-”). Take hold of the handlebars with both hands and pull the front brake. Lean with your entire weight on the fork and remove your weight immediately. The fork will extract at the same speed as you made it compress.

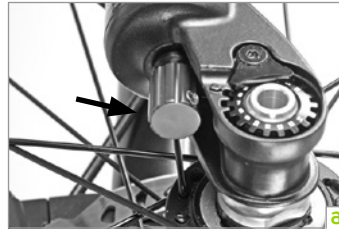
Turn the red adjusting knob in the direction “+” (a) until you hear a click. Compress the fork once again with the front wheel brake pulled and then remove the weight abruptly once again. You will note that the rear shock extends more slowly.

Repeat the compression and the release by continuously turning the rebound damping. You will get a feeling for the working of the rebound damping.

The typical setting of the rebound damping is an extension of the suspension components at reduced speed, however not at a sluggish pace. A rebound movement at reduced speed ending up in a sluggish movement is a definitely too high damping.

Ride over an obstacle (e.g. down a kerb) subsequently and turn the rebound damping in small steps towards the “+” setting. You have found the proper rebound setting when the suspension fork does not cycle more than once. Always check a changed adjustment during a test ride in the terrain.

Some suspension forks have a **compression damping (b+c)** in addition. The typical compression damping, or on some suspension forks the high-speed compression damping, slows down the compression when riding at high speed over an obstacle. A high compression speed would possibly make the fork bottom out.



A weaker damping ensures a good responsive performance, leads however to an excessive compression of the suspension fork when riding at high speed over obstacles, e.g. steps, or to a bouncing when riding out of the saddle under certain conditions. A too strong damping hardens the suspension and thus reduces the riding comfort.

If you have set the sag correctly, as above described, and the fork works properly during a normal test ride, but bottoms out in an extreme situation, you can increase the compression damping.

Proceed click by click as a too strong compression damping prevents the suspension fork from using the complete suspension travel. The setting of the compression damping can be a long process which has to be carried out consciously and always in small steps.

Start with the lowest step, i.e. the adjusting knob must be turned fully towards the marking “-”.

Always check a changed adjustment during a test ride in the terrain (d).

If you do not trust the setting of the damping or if problems occur with it, contact your MERIDA dealer or follow the corresponding operating instructions of the suspension fork manufacturer, which you can find on this MERIDA CD-ROM.



A too strong damping (rebound damping) of the fork can result in the fact that the fork no longer extends when riding over a quick series of obstacles. Risk of an accident!



Do not turn any screws by using tools in the vague hope of adjusting them somehow (e). You could be loosening the fastening mechanism, thus provoking an accident. Normally, the adjustment devices are operated with the fingers and are marked by all manufacturers with a scale or with "+" (for stronger damping/harder suspension) and "-" signs.



When mounting a new front tire, make sure there is enough clearance between tire and fork crown as the fork compresses entirely. If necessary, deflate the suspension fork completely and press the handlebars forcefully downward to check this. This can block the front wheel. Risk of an accident!



Do not ride your bike, when the suspension fork bottoms out. This could damage the suspension fork itself as well as the frame. The spring rate should always be adjusted to the weight of the rider and the baggage as well as to the riding conditions.



Contact your MERIDA dealer or follow the respective instructions in the operating instructions of the suspension fork manufacturer on this MERIDA CD-ROM.



Lockout

When taking long uphill rides involving hard pedaling out of the saddle, a suspension fork is typically bobbing. It is advisable to lock the damping, if the suspension fork has a lockout mechanism (f+g). For downhill rides on uneven ground the lockout mechanism must be open stringently.



Do not actuate the lockout function when riding over rough terrain, but only when riding over smooth terrain (such as roads or field tracks).

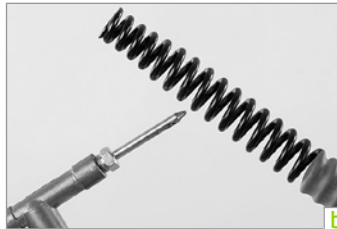
Maintenance

Suspension forks are components of sophisticated design that require regular maintenance and care. This has led almost all suspension fork manufacturers to establish service centers where you can have your forks thoroughly checked and overhauled at regular intervals according to use, e.g. once a year.

The following routines are essential for maintenance:

1. Make sure the sliding surfaces of the stanchion tubes and the wiper rings are absolutely clean.
2. Clean the suspension fork, if it is soiled, directly after the ride with plenty of water and a soft sponge (h).

3. After washing your bike, spray the stanchion tubes of the suspension fork with a little grease spray (a) or apply a very thin film of hydraulic oil. Compress the fork several times and wipe off excess lubricant with a clean rag before you set off for your next ride. Be sure to use the lubricant recommended by the manufacturer.
4. Do not use a steam jet or aggressive cleaning agents for cleaning! Ask your MERIDA dealer for an appropriate cleaning agent.
5. If your suspension fork has steel coils, you should regularly have the coils cleaned and lubricated with a non-corrosive resin-free grease (b). Some fork manufacturers supply special greases for fork maintenance. Strictly observe the recommendations of the manufacturers. These are routines for the suspension fork service center.
6. Suspension forks with pneumatic springs must be checked regularly for air pressure (c), since the air escapes over time.



Suspension forks are constantly being sprayed with water and dirt from the front wheel. Clean them with plenty of water after every ride.



Be sure to have your suspension fork checked by a service center of the fork manufacturer once a year at least.



More information on adjusting and maintenance is available on the internet at
www.srsuntour-cycling.com
www.magura.com
www.ridefox.com
www.rockshox.com
www.manitoumtb.com
www.rst.com.tw
www.xfusionshox.com
www.dtswiss.com





Suspension elements are of sophisticated design. The maintenance routines and above all the disassembly of the suspension elements are jobs best left to your MERIDA dealer or the fork manufacturer's service center.

Rear shocks

Full suspension MERIDA bikes are not only equipped with a suspension fork (e) but also with movable rear stays (f) which are sprung and damped by a rear shock (g). This feature gives you better control of your MERIDA bike when riding cross-country or on rough road surfaces and ensures more ground contact for the tire. It noticeably reduces the strain on you and your bike caused by the mechanical shocks from the terrain.

Rear shocks differ in their types of spring elements and damping. The rear shock normally works with an air spring element or – less frequently – with coil springs. Damping is usually done by oil. Depending on the system, they have one or more bearing axles.


 **Rear shock manufacturers normally include instructions with their deliveries. Read them carefully before changing any settings or doing any maintenance work on your rear shock. You can find the instruction of the rear shock manufacturer on this MERIDA CD-ROM.**

 **Also observe the suspension glossary at the beginning of the chapter “Suspension”.**



What to bear in mind when adjusting the saddle

Depending on the adjustment of the rear shock, the saddle may tilt a little backwards when mounting, which you should keep in mind when adjusting the saddle tilt. If you have trouble sitting, try lowering the saddle nose a little relative to the usual position.

 **Full-suspension MERIDA bikes have a markedly greater ground clearance than bikes without suspension. If the saddle is adjusted to its proper height, you will not be able to reach the floor with your feet. Set the saddle a little lower to begin with and practice getting on and off the saddle.**

Adjusting the spring rate

To work perfectly, the rear shock has to be adjusted to the weight of the rider, the sitting posture and the intended use. Be sure to have this adjustment carried out by your MERIDA dealer at the time of delivery.

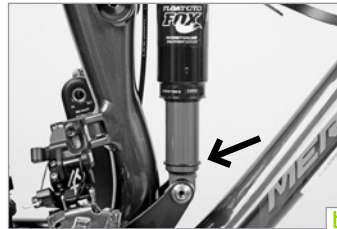
Note in general that the rear shock must give in a little even when you are just sitting on your MERIDA bike – this is the so-called negative suspension travel or sag (h). If you ride over a pothole the spring is decompressed and the rear shock compensates for the unevenness. If the air pressure or the spring preload is too high, this effect is lost because the rear shock is already fully extended. This means that an important comfort and safety factor is lost if the tire briefly loses contact with the ground.

In general, cross-country and marathon racers prefer a shorter negative suspension travel (sag), freeriders or downhillers riding often in rough terrain prefer a longer one. In the case of cross-country and marathon bikes the rear shock should yield by 10-20 % of the maximum suspension travel, in the case of all mountain, enduro and freeride bikes by 25-35 %.

To measure the travel you can use the rubber ring **(a)** mainly located on the thinner, plunging tube of the rear shock. If there is no rubber ring, tie up a cable tie around one of the thin tube. Make sure it is not too tight, you should still be able to move it, it should however not slip by itself.

Put on your usual riding clothing (including if necessary a packed rucksack), sit on your MERIDA bike and bring yourself into the usual riding position. Lean against a fixed object (railings, wall etc.) and make sure you do not fall over. Ask a helper to move the rubber ring or the cable tie downwards against the dust seal at the lower leg.

Get off your MERIDA bike so that the rear shock does not compress any more. The distance between the rubber ring/cable tie and the wiper is the negative suspension travel, or sag **(b)**. Compare it against the total suspension travel (as specified by the manufacturer) to determine whether the suspension should be set to be harder or softer.



In the case of air spring rear shocks the spring rate is set through the air pressure in the rear shock **(c)**. The pressure must be set before the first ride by means of a special high-pressure pump with pressure gauge and modified later as required due to changes in the weight of the rider and/or load.

Note the appropriate setting values and check them subsequently at regular intervals. Always follow the recommendations of the manufacturer and never exceed the maximum air pressure for the rear shock. Always make a test ride after each change to the settings.

In the case of most rear shocks with coil springs a pre-load can be applied to the springs within tight limits by turning an adjusting ring. If that is not possible and the desired negative suspension travel ("sag") cannot be set, the coil spring must be replaced by a harder or softer model. The replacement is a job for your MERIDA dealer.

When replacing any parts, be sure to only use parts that bear the appropriate mark and, to be on the safe side, original spare parts. Your MERIDA dealer will be pleased to help you.

Make sure the valve is protected with a valve cap during cycling **(d)**.

Always make a test ride over terrain with various surfaces after each change to the settings. Check afterwards the position of the rubber ring/cable tie (e+f). Its distance from the wiper is the maximum suspension travel that you have used.

If the rubber ring/cable tie has moved by even a few millimeters, the setting of the rear shock is too hard. Reduce the pressure, or, in the case of rear shocks with coil spring, the spring preload. If that brings no improvement, have the springs replaced.

If the rubber ring/cable tie has shifted over the entire length of the tube or if the rear shock audibly bottoms out and hits the top repeatedly when riding off-road or on bad roads, the setting of the springs is too soft. In the case of rear shocks with air-suspension the pressure must be increased. In the case of rear shocks with steel coils, have them replaced by your MERIDA dealer.



In the case of full-suspension bikes the rear frame is designed in a way to absorb shocks. If the rear shock is too rigid and jammed, the terrain-induced shocks pass directly into the frame without any damping. The frame is normally not designed to withstand such undamped stresses. If your rear shock has a lockout mechanism, do not activate the lockout function (g) when riding in rough terrain (h), but only when riding over smooth terrain (roads, field tracks).



The rear shock should be set up and adjusted in a way that it does not reach the end of its travel, i.e. bottoms out, unless in extreme cases. A spring rate which is too soft (too low air pressure) can usually be heard or felt as a “clunk” type noise. This noise is caused by the sudden complete compression of the rear shock as it reaches bottom out. If the rear shock frequently reaches bottom out, it will fail over time, and so will the frame.



In case of inquiries, contact your MERIDA dealer or follow the respective instructions in the operating instructions of the rear shock manufacturer on this MERIDA CD-ROM.

Readjusting the suspension travel

Normally, you cycle with the maximum suspension travel that your full-suspension rear frame allows. This provides maximum cycle fun and utmost control over your MERIDA mountain bike.

Some rear frames offer the possibility of readjusting the suspension travel depending on the terrain you are riding on. With some models reducing the travel makes for an easier uphill riding. A reduced travel may result in a modified spring characteristic of the rear frame making the rear frame either softer or firmer. This can reduce the comfort of suspension, when readjusting the rear shock.

In the case of other models, changing the suspension travel does not result in a modified spring characteristic. The rear shock provides an identical comfort of suspension with a however clearly reduced suspension travel.

In the case of full suspension rear frames this is typically done by screwing off segments on which the rear shock is mounted or by loosening or readjusting screws. Retighten the bolts subsequently to the required torque.



Do not ride with reduced suspension travel in rough terrain and in particular not downhill!



For more information on readjusting the suspension travel, see the operating instructions of the rear shock manufacturer on this MERIDA CD-ROM.

Adjusting the damping

The damping is adjusted by valves inside. When the oil is forced through these valves this slows down the speed with which the rear shock is extended or compressed and prevents the suspension “bouncing” after hitting an obstacle. This is how the reaction to obstacles can be optimized.

Rear shocks with adjustable rebound damping **(a)** have an adjusting knob (mostly red) to slow down or accelerate the rebound movement.



If a second (mostly blue) knob is available, the compression speed can be set and/or the lockout function **(b)** can be activated.

Start the setting with a completely open damping (rebound and compression on “-”) **(c)**. Hold the saddle with both hands. Lean with your entire weight on the saddle and remove your weight immediately. The rear shock will extract at the same speed as you made it compress.

Turn the red adjusting knob in the direction “+” **(d)** until you hear a click. Press the saddle downwards and remove the weight abruptly once again. You will note that the rear shock extends more slowly.

Repeat the compression and the release by continuously turning the rebound damping. You will get a feeling for the working of the rebound damping.

The typical setting of the rebound damping is an extension of the suspension components at reduced speed, however not at a sluggish pace. A rebound movement at reduced speed ending up in a sluggish movement is a definitely too high damping.

Ride over an obstacle (e.g. down a kerb) subsequently and turn the rebound damping in small steps towards the "+" setting. You have found the proper rebound setting when the rear shock does not cycle more than once (e-g). Always check a changed adjustment during a test ride in the terrain.

Some rear shocks have a compression damping in addition. The typical compression damping, or on some rear shocks the high-speed compression damping, slows down the compression when riding at high speed over an obstacle. A high compression speed would possibly make the rear shock bottom out.

A weaker damping ensures a good responsive performance, leads however to an excessive compression of the rear shock when riding at high speed over obstacles, e.g. steps, or to a bouncing when riding out of the saddle under certain conditions. A stronger damping hardens the suspension and thus reduces the riding comfort.

If you have set the sag correctly, as above described, and the rear shock works properly during a normal test ride, but bottoms out in an extreme situation, you can increase the compression damping (h).



Proceed click by click as a too strong compression damping prevents the rear shock from using the complete suspension travel. The setting of the compression damping can be a long process which has to be carried out consciously and always in small steps.

Start with the lowest step, i.e. the adjusting knob must be turned fully towards the marking "-".

Always check a changed adjustment during a test ride in the terrain.

If you do not trust the setting of the damping or if problems occur with it, contact your MERIDA dealer or follow the corresponding operating instructions of the rear shock manufacturer, which you can find on this MERIDA CD-ROM.



A too strong damping of the rear shock (rebound damping) can result in a sluggish rebound movement with a rear shock that will not recover when exposed to a quick series of impacts. Risk of an accident!



Do not turn any screws by using tools in the vague hope of adjusting them somehow. You could be loosening the fastening mechanism, thus provoking an accident. Normally, the adjustment devices are operated with the fingers and are marked by all manufacturers with a scale or with "+" (for stronger damping/harder suspension) and "-" signs.



When mounting a new rear tire, make sure there is enough clearance between tire and frame as the rear frame compresses entirely. If necessary, deflate the rear shock completely and press the saddle forcefully downward to check this. This can block the rear wheel. Risk of an accident!



Do not ride your bike, when the rear shock bottoms out. This could damage the rear shock itself as well as the frame. The spring rate should always be adjusted to the weight of the rider and the baggage as well as to the riding conditions.



Contact your MERIDA dealer or follow the respective instructions in the operating instructions of the rear shock manufacturer on this MERIDA CD-ROM.

Lockout

When taking long uphill rides involving hard pedaling out of the saddle, a rear shock is typically bobbing. It is advisable to lock the damping, if the rear shock has a lockout mechanism. For downhill rides on uneven ground the lockout mechanism must be open stringently.



Do not actuate the lockout function when riding over rough terrain (a), but only when riding over smooth terrain (such as roads or field tracks) (b).



Maintenance

Rear shocks and rear frames are components of sophisticated design that require regular maintenance and care. This has led almost all rear shock manufacturers to establish service centers where you can have your rear shocks thoroughly checked and overhauled at regular intervals according to use, e.g. once a year.

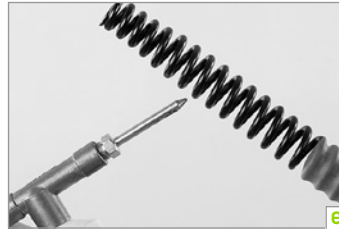
The following routines are essential for maintenance:

1. Make sure the sliding surfaces of the piston rod are absolutely clean.
2. Clean the rear shock and rear frame, in particular the bearings, with plenty of water and a soft sponge (c+d) after every ride or when they are soiled.
3. After washing your MERIDA bike, spray the piston rod of the rear shock and the bearing areas with a little grease spray or apply a very thin film of hydraulic oil. Compress the rear shock several times and wipe off excess lubricant with a clean rag before you set off for your next ride. Be sure to use the lubricant recommended by the manufacturer.
4. Do not use a steam jet or aggressive cleaning agents for cleaning! Ask your MERIDA dealer for an appropriate cleaning agent.

5. If your rear shock has steel coils, you should regularly have the coils cleaned and lubricated with a non-corrosive resin-free grease (e). Some rear shock manufacturers supply special greases for fork maintenance. Strictly observe the recommendations of the manufacturers. These are routines for the rear shock service center.
6. Rear shocks with air spring must be checked regularly for air pressure (f), since the air escapes over time.
7. Check the proper fit of all rear frame bolts according to the marking on the rear stay by using a torque wrench at regular intervals. Also check the bearing positions of the rear frame for lateral play or the rear shock bearing for vertical play.

For checking lift your MERIDA bike by the saddle (g) and try to move the rear wheel from side to side. If necessary, ask a helper to hold the frame tight in the front area.

The check the rear shock for play place the rear wheel gently on the ground and lift it again a little. Check for any rattling. If there is any play, ask your MERIDA dealer to eliminate it without delay.



e



f



g



Suspension elements are of sophisticated design. The maintenance routines and above all the disassembly of the suspension elements are jobs best left to your MERIDA dealer or the rear shock manufacturer's service center.



Rear shocks are constantly being sprayed with water and dirt from the rear wheel. Clean them with plenty of water after every ride.



Be sure to have your rear shock checked by a service center of the rear shock manufacturer once a year at least.



More information on adjusting and maintenance is available on the internet at
www.srsuntour-cycling.com
www.ridefox.com
www.rockshox.com
www.manitoumtb.com
www.rst.com.tw
www.xfusionshox.com
www.dtswiss.com
www.magura.com

Riding a MERIDA pedelec – Special features

Your MERIDA pedelec is designed to be used like a conventional bike. The unique riding experience, however, starts when you actuate the drive system **(a)**. At that moment the assistance generated by the 250 W motor **(b)** increases with its high torque the stronger you pedal.

Set off for your first ride by selecting the lowest level of drive assistance. Gradually get used to the additional power. Slowly approach the potential of your MERIDA pedelec in an area free of traffic.

Practice typical riding situations such as starting off and braking, tight corners and riding on narrow cycle paths and lanes. This is where a MERIDA pedelec clearly differs from a conventional MERIDA bike.



Pulling the brake lever of the rear brake stops the motor. Emergency stop!



Be aware that the brakes of your MERIDA pedelec are always more effective than the drive. If you face any problems with your drive (e.g. because it pushes you forward in front of a bend), slow down your MERIDA pedelec carefully.



Riding with drive assistance

The system is switched on and off at the buttons of the control element on the battery or on the handlebars. Furthermore, different assistance modes can be selected, the remaining capacity of the rechargeable battery is displayed and the different functions of the cycle computer **(c+d)**, if available, can be selected.

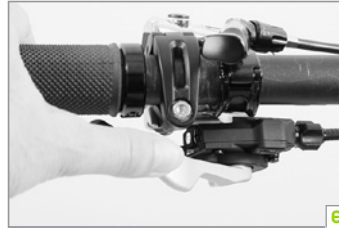
When switched on, the system activates during pedaling and the drive assistance is available. Sensors measure your pedaling movements and control the fully automated drive assistance according to the selected assistance mode. The level of the additional propulsion depends on the assistance mode, your speed and, as applicable, the amount of force applied to the pedals.

The assistance switches off when you reach a speed of more than 25 km/h.

Keep in mind that you may have to change your riding habits: Do not mount by placing one foot on the pedal and by trying to throw the other leg over the saddle. The MERIDA pedelec would set off suddenly. Risk of an accident!

Stop pedaling earlier than you are used to before riding a turn or bend. Otherwise there may be too much propulsion and your cornering speed may be too high.

Do not give in to the temptation to always ride in a high gear, due to the strong motor. Shift gears frequently **(e)** in the same way that you are used to doing with a conventional MERIDA bike so as to make your own contribution to your forward progress as efficient as possible. Your cadence should always be in a smooth flow. In other words, you should pedal at more than 60 crank rotations per minute.



e

Keep in mind that the other road users are not yet used to the new pedelecs and their higher speeds. Ride with this fact in mind and anticipate the actions of other road users. Be aware that the speed you ride at will be clearly faster than you are used to. Therefore, keep these facts in mind and be ready to brake whenever unclear or possibly dangerous situations come into your field of vision.



f



Do a test ride in an unfrequented area **(f)** to make yourself familiar with the riding characteristics of your MERIDA pedelec and the possibly higher speed and acceleration, before riding on public roads. Risk of an accident! Never ride without a helmet!



Do not step on the pedals before sitting in the saddle, select the lowest drive assistance and be ready to brake when you set off. Risk of an accident!



g



h



Keep in mind that due to the higher driving power at the rear wheel the risk of an accident increases with slippery roads (due to wetness, snow, gravel etc.). This applies all the more when riding bends. Risk of an accident!



Please note that car drivers and other road users may underestimate your speed. Always wear bright clothing. Therefore, always ride on public roads with this fact in mind and anticipate the actions of other road users. Risk of an accident!



Keep in mind that pedestrians do not hear you when you approach at high speed. Therefore, ride particularly defensive and anticipating **(g)** when using cycle lanes and cycle/footpaths to avoid accidents. If necessary, ring the bell **(h)** to warn others.

Range – Useful information for a long ride

How long and how far you can benefit from the auxiliary drive depends on several factors, i.e. the road conditions, the weight of the rider and any additional load, the rider's pedal force, the degree or mode of assistance, (head)winds, frequent stops, temperature, weather conditions, topography, tire pressure, etc.

The charge state of your rechargeable battery can be read from the display of the control element on the handlebars or, additionally, on the rechargeable battery.



In general, the batteries of MERIDA pedelecs have no memory effect. It is recommended that you charge the battery after every long ride. Avoid any deep discharge of the rechargeable battery.



For more information see the system instructions of your drive manufacturer on this MERIDA CD-ROM.

To extend the range it is recommended that you ride with low assistance (Eco) **(a)** or no assistance at all on level or downhill trails and only select maximum drive assistance (Turbo) **(b)** with headwinds, heavy additional loads and/or when climbing hills.

Furthermore, you can extend the range by

- checking the tire pressure regularly, i.e. once a week with a pressure gauge, and changing it, if necessary **(c)**



- shifting gears down in front of traffic lights and intersections or in general in cases of stops and by setting off in low gears
- shifting gears regularly, as you would do on a MERIDA bike without drive
- not only riding in high gears
- riding with these facts in mind and always looking ahead to avoid any unnecessary stops
- reducing your additional load, i.e. without any unnecessary baggage
- storing your battery in your home and installing it only shortly before you set off on your MERIDA pedelec in cooler weather, in particular when it is cold
- not parking your MERIDA pedelec in the blazing sun

For more information on whether your MERIDA pedelec has a recuperation function, see the system instructions of your drive manufacturer on this MERIDA CD-ROM.

If your battery has not enough capacity to reach your destination, benefit from the decisive advantage of the hybrid concept of your pedelec: Without drive assistance you can ride your MERIDA pedelec like a usual bike with an unlimited range and nearly without compromising on riding characteristics.



If your battery runs empty during the ride, do not recharge the battery with any charger, even if it happens to be fitted with an identical connector type. Risk of explosion! Only charge your battery with the supplied charger **(d).**

Riding without drive assistance

You can also use your MERIDA pedelec without drive assistance, i.e. just like a conventional MERIDA bike.

Observe the following points when riding without the rechargeable battery **(e)**:

- If you want to ride without drive assistance with mounted battery, you can switch on the drive HMI of your pedelec to benefit from the functions of your cycle computer.
- If the lighting set of your pedelec **(f)** is powered by the rechargeable battery, you cannot use your light when riding without battery.
- After you have removed the battery of your pedelec: Keep the connections of the rechargeable battery free of dirt and moisture **(g)**.



Riding a MERIDA speed pedelec – Special features

Basically, a MERIDA speed pedelec is a pedelec, which is only clearly faster. Be sure to thoroughly read the chapter “Riding a MERIDA pedelec – Special features” before reading this chapter. Keep in mind that all tips and warnings given in the mentioned chapter apply all the more and with still greater importance to MERIDA speed pedelecs. Practice the handling of the still more powerful and faster MERIDA speed pedelec and always ride with foresight.

In contrast to MERIDA pedelecs MERIDA speed pedelecs are classified as e-bikes and thus as motor vehicles. This entails a number of regulations according to which your MERIDA speed pedelec must be equipped:

- In addition to the usual bike components they must be fitted with a rear view mirror **(h)**.
- A MERIDA speed pedelec must have liability insurance, an operating license or EU type approval, and the insurance marking must be attached.
- The tires must have a minimum tread depth of 1 mm, as is well known for motor vehicles. Every tire worn down to this minimum depth must be replaced by an identical one; otherwise this will void the operating license.

Inform yourself in the country where you use your MERIDA speed pedelec about the regulations of

- using cycle lanes and paths within built-up areas,
- using lanes that are marked with a road sign allowing access for mopeds,
- using your MERIDA speed pedelec on cycle lanes which are allowed for mopeds,
- may not ride in the wrong (opposing) direction up one-way roads, even if ordinary cyclists are permitted to do this,
- using pedestrian zones, even when they are allowed for bikes,
- using bike parking facilities,
- using forest trails and
- using your MERIDA speed pedelec on lanes which are closed to motor vehicles, motorcycles and mopeds,
- using your MERIDA speed pedelec on public roads and on private premises, if authorized by the owner.

Please check in the country where you are using your MERIDA speed pedelec (a) whether towing child trailers (b) and whether mounting and using child seats is allowed or not. Check in the bike card (c) and ask your MERIDA dealer, whether mounting a child seat on your MERIDA speed pedelec is permitted.



Bike card		MERIDA	
Model:		Intended use	<input type="checkbox"/> Category 3 <input type="checkbox"/> Category 4 <input type="checkbox"/> Category 5
Motor:		<input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2	
Appearance:		Permissible overall weight	PERMITTED (see instructions) <input type="checkbox"/> No
Color:		PERMITTED (see instructions) <input type="checkbox"/> No	
Chain system:	Mid-drive/rear hub	Front axle	<input type="checkbox"/> Clap <input type="checkbox"/> Clap
Braking system:		Front/rear wheel	<input type="checkbox"/> Clap <input type="checkbox"/> Clap
Max. No.:		Disc brake permitted	<input type="checkbox"/> Clap <input type="checkbox"/> Clap
Accessories:		Disc brake permitted	<input type="checkbox"/> Clap <input type="checkbox"/> Clap
Accessories (child seat):		Permissible brake type	<input type="checkbox"/> No
Child seat (max. weight):			
Supplemental accessories:		Brake wear	Motor equipped
Other accessories:		Right brake	<input type="checkbox"/> Foot pedal brake <input type="checkbox"/> Disc wheel brake
Other accessories:		Left brake	<input type="checkbox"/> Foot pedal brake <input type="checkbox"/> Disc wheel brake
Other accessories:			
Other accessories:			
Other accessories:			
Other accessories:			
Other accessories:			

Read the manual "Merida your first ride" in the box set of your original MERIDA mounting instructions.

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For your own safety, always ride your MERIDA speed pedelec with the light switched on, wear bright clothing as well as a suitable helmet and glasses.



If a component needs to be replaced, make it a rule to only use original spare parts. Wearing parts of other manufacturers, e.g. brake pads or tires that are not of identical size, may cause harm to the safety of your MERIDA pedelec or MERIDA speed pedelec. Risk of an accident! In the case of MERIDA speed pedelecs be sure to only assemble original spare parts, otherwise the operating license expires. Read the respective instructions in the system instructions of your drive manufacturer on this MERIDA CD-ROM.



Be aware that the brakes of your MERIDA speed pedelec are always more effective than the drive. If you face any problems with your drive (e.g. because it pushes you forward in front of a bend), slow down your MERIDA speed pedelec carefully.



The regulations and rules for pedelecs and speed pedelecs are being revised permanently. Read the daily press to keep you informed about current legislative changes.



When riding MERIDA speed pedelecs wearing a suitable cycle helmet is compulsory (d).



Pulling the brake lever of the rear brake stops the motor. Emergency stop!

Useful information for proper handling of the rechargeable battery

Remove the rechargeable battery **(e+f)**, if you do not use your MERIDA pedelec for a longer period of time (e.g. during the winter season). Store the rechargeable battery in a dry room at temperatures between 5 and 20 degrees Celsius. The state of charge should be 50 to 70% of the charging capacity. Check the state of charge, if the rechargeable battery is left unused for more than two months, and recharge it in between, if necessary.

Clean the battery housing with a dry or, if at all, a slightly moist rag. Do not direct the water jet of a high-pressure cleaner at the rechargeable battery, as there is a risk of water entry and/or short-circuit.

For more information on the proper handling of your rechargeable battery see the system instructions of your drive manufacturer on this MERIDA CD-ROM.



Charge your battery only with the supplied charger **(g). Do not use the charger of any other manufacturer, not even when the connector of the charger matches your rechargeable battery. The rechargeable battery can heat up, catch fire or even explode!**



Keep the rechargeable battery and the charger out of the reach of children!



We recommend that you charge your battery during the day and only in dry rooms which have a smoke or a fire detector; but keep it off your bedroom. Place the battery during the charging process on a big, non-inflammable plate made of ceramics or glass **(h)**! Unplug the battery once it has been charged up.



Keep the rechargeable battery and the charger away from moisture and water during the charging process to exclude electric shocks and short circuits.



Do not use a rechargeable battery or a charger that is defective. If you are in doubt or if you have any questions, contact your MERIDA dealer.



Do not expose your battery or the charger to the blazing sun.



Do not charge any other electrical devices with the supplied charger of your MERIDA pedelec!



The drive is not approved for steam cleaning, high-pressure cleaning or cleaning with a water hose. The contact of water with the electrics or the drive can destroy the units. The individual drive components can be cleaned with a soft rag and neutral detergents. You may use a moist rag, but not excessive water. Keep the rechargeable battery dry and do not submerge it! Risk of explosion!



Make sure your rechargeable battery is in sound condition (a). Do not open, disassemble or crush the battery. Risk of explosion!



Make sure your rechargeable battery is not exposed to mechanical impacts.



Keep your battery away from fire and heat. Risk of explosion!



Batteries must not be short-circuited. Therefore store them in a safe storage area and make sure the battery is not short-circuited accidentally (e.g. with another battery). In addition, the rechargeable battery must not be stored inappropriately, e.g. in a box or in a drawer where they can be short-circuited by other conductive materials or where they can short-circuit each other. Do not deposit any objects in the storage area (e.g. clothes).



Make sure to use the battery only for the MERIDA pedelec for which it is designed.



When you remove your battery from the holder for charging it (b) with your MERIDA pedelec left in the open during the charging process, you should protect the connections, e.g. with a plastic bag against rain, water, moisture and dirt (c). If the connections of the rechargeable battery are soiled, clean them with a dry rag.



a



b



c



d



Make sure not to discharge your rechargeable battery completely (also referred to as depth discharge). This occurs often when the battery has run out completely and the MERIDA pedelec was left standing for some days. Depth discharge will affect the rechargeable battery of your MERIDA pedelec permanently. A deep-discharged battery can only be recharged in exceptional cases and with special chargers. Contact your MERIDA dealer.



If the rechargeable battery or the charger (or parts of it) must be replaced, only use original spare parts. Contact your MERIDA dealer, if necessary.



Charge the battery at an ambient temperature of approx. 20 degrees Celsius. Therefore, before starting the charging, wait until the temperature of the battery has increased or decreased after a ride in cold weather or hot weather.



Do not dispose of your rechargeable battery in the normal household rubbish (d)! It must be disposed of according to battery disposal regulations. Therefore, sellers of new rechargeable batteries must provide collection of old batteries and appropriate disposal. If you are in doubt or if you have any questions, contact your MERIDA dealer.



Remove the rechargeable battery from your MERIDA pedelec or MERIDA e-bike, if you do not use your MERIDA pedelec for a longer period of time and keep it clean and dry.



Do not charge your battery over a long period of time, if you do not need it.

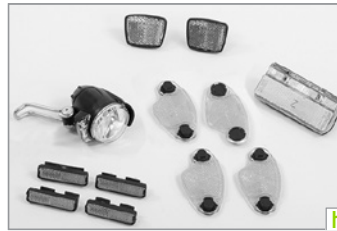


Lithium-ion batteries have no memory effect; they can therefore be charged at any time without affecting battery life.



Also observe the notes on the respective labels on the rechargeable battery (e) or on the charger (f).

For more information on the proper handling of the rechargeable battery see the system instructions of your drive manufacturer on this MERIDA CD-ROM.



Lighting system

When riding on public roads a properly functioning lighting set is obligatory (see the chapter “Legal requirements for riding on public roads”).

Battery-powered lighting

The regulations on the use of battery-operated front lamps and rear lights are different in each country (g). Familiarize yourself with the relevant country-specific regulations and comply with the road traffic regulations in your country (h).

For more information see the chapter “Legal requirements for riding on public roads”.

Things worth knowing about your MERIDA bike

Cycling helmets and glasses

Cycling helmets (a) are absolutely recommendable. Your MERIDA dealer has a variety of styles and sizes. Verify that the helmet complies with the test standard DIN EN 1078. Cycling helmets are only approved for use during cycling. Observe the manufacturer's instructions.



Never ride without a helmet and glasses (b)! But remember that even the safest helmet is useless unless it fits properly and is correctly adjusted and fastened.

In addition to a cycling helmet and suitable clothing, cycling glasses are absolutely essential when you are riding your MERIDA bike. They do not only protect your eyes from the sun and the wind, but also keep out flies and other impurities that may impede your vision when they fly into your eyes. Risk of an accident!

Good cycling glasses must fit closely against your face so that the wind does not get into your eyes from the side. There are a great many different models, e.g. without tinting and UV protection, which can be worn at night or in twilight conditions, or glasses with a high level of UV protection that you should wear if the sun is stronger.

Your MERIDA dealer has a wide range of cycling glasses available and will be pleased to advise you.



a



b



c



d

Clothing

Cycling trousers (c) are essential if you want to sit comfortably. These close-fitting trousers have special padding in the seat. They have no seams that can press into you and they do not form folds. Cycling trousers are therefore designed to be worn next to the skin.

Since sporty cycling will soon bring you out in a sweat, a jersey made of synthetic materials is ideal (d). The fibers themselves do not take up any moisture but instead wick the sweat away from the skin up to the surface of the materials and thus prevent you getting cold from the cool wind produced by your speed. On longer tours you should in addition have suitable protection against the rain. Your MERIDA dealer would be glad to help you choose the right equipment.



Never ride with wide-cut trousers or skirts that might get caught in the spokes, chain or chainwheels. To avoid any such mishap, use suitable clips or straps, if necessary.



For increased visibility to other road users be sure to wear striking and bright-colored clothing!

The pedals and the shoes

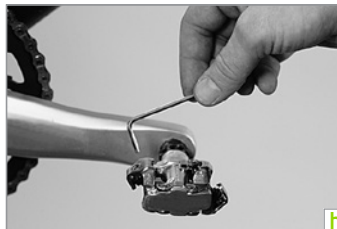
Cycling shoes (e) should be made of solid material to provide firm support for your feet. In addition, they should have a stiff sole so that the pedal cannot press through. The sole should not be too wide in the area of the heels, as the rear stays or the crank will otherwise get in the way of your pedaling. This will prevent your feet from assuming a natural position when pedaling and may cause knee pain in the long run.

Special cycling shoes are obligatory if your MERIDA bike is equipped with clipless pedals. With these shoes cleats are fixed to the sole. They give you a firm connection between shoe and pedal and allow depending on the model an acceptable walking position.

The main advantage is that these clipless pedals (f+g) prevent your feet from slipping off when pedaling fast. They enable you not only to push but also to pull the pedals. This makes it easier to pedal fluidly and considerably improves the transmission of the force as opposed to pedals with an open pedal cage.

The usual way to engage with the pedal is to turn it from the lowest position of the crank to the horizontal using the tip of the cleat and push down on the back of it. Normally, the shoe engages with the pedal with a click which you will hear and feel clearly.

The release force of clipless pedals is adjusted by means of an Allen key (h). If there are any creaking or squeaking noises occurring, some grease applied to the contact points will solve the problem in most cases. These



noises as well as lateral play of the shoe on the pedal can, however, be also signs of wear. Check the cleats at regular intervals.



Make sure the fastening bolts of the cleats are properly tightened, as you will find it almost impossible to disengage your shoe from the pedal, if the cleat is loose. Risk of an accident!



Taking up the pedals, engaging and disengaging the shoes should first be practiced when stationary. Later on you can refine your technique in a place clear of traffic.



Only use clipless pedals allowing you to engage and disengage smoothly. A defective pedal or a badly worn cleat can make the shoe disengage from the pedal. Or unclipping the shoe from the pedal is sometimes very difficult or even impossible. In both cases, there is the danger of an accident!



Make sure that the pedals and shoe soles are always clear of mud and other foreign bodies and grease the lock-in mechanism with lubricant at regular intervals.



Most cycling shoes with cleats are only suitable for walking to a limited extent. As the cleats are sometimes thicker than the sole, they provide less grip even on a non-slip ground. Be particularly careful.



Ask your MERIDA dealer for advice about the different shoe and pedal models. Cycling shoes come in various styles for specific uses.



Read the operating instructions of the pedal manufacturer on this MERIDA CD-ROM.

Accessories

In purchasing your MERIDA bike you laid the foundation for many years and miles of enjoyable cycling. Whatever you are planning to do with your MERIDA bike, be sure to have proper equipment and to keep a few tips in mind. Your MERIDA dealer has a variety of useful accessories on offer enhancing both your safety and convenience.

Your MERIDA bike can be fitted with various kinds of accessories. Make sure to observe the requirements according to the traffic regulations in your country and of the DIN EN standards. Any retrofitted part must be compatible with your MERIDA bike. If you are in doubt or if you have any questions, contact your MERIDA dealer.



Improper accessories may change the qualities of your MERIDA bike and even cause an accident. Therefore, before fitting any accessories contact your MERIDA dealer and observe the instructions regarding the intended use of your MERIDA bike.



a



b



c



d



Retrofitted accessories, such as mudguards, pannier racks etc. can impair the functioning of your MERIDA bike. Ask your MERIDA dealer for advice before mounting any kind of accessories to your bike.



Before buying any additional bells or lighting accessories (a), inform yourself thoroughly whether they are permitted and tested and accordingly approved for use on public roads. Make sure additional battery/accumulator-powered lamps are marked with the wavy line and the letter "K".

Bar ends

Flat handlebars can be equipped with bar ends (b+c). Some thin-walled handlebars (primarily those made of aluminum or carbon fiber) require additional handlebar plugs or other special parts to prevent the handlebars from being crushed or broken. Be sure to have them mounted by your MERIDA dealer!

Bicycle locks

Do not forget to take a high quality D- (d) or chain lock with you on your ride. The only way to effectively protect your MERIDA bike against theft is to lock it to an immovable object.

Puncture kit

The most important accessories for a successful cycle tour are a tire pump and a small tool kit. The tool kit should include two plastic tire levers, the most commonly used Allen keys, a spare tube, a tire repair kit, your mobile phone, if necessary, and a little cash (e). In this way you will be well prepared in the event of a puncture or some other mishap.



e

Cycle computers

Electronic tachometers determine the travelling and average speed, the number of kilometers per day and year, and also the travelling time (f). Top-end models show the highest speed that was reached, the difference in height, the cadence or (with a special chest strap) your pulse rate as well.



f

Today, there are global positioning systems (GPS) and specific power meters for optimal training on the market which are compatible with your MERIDA bike.

Kickstand

Bike kickstands (g) are intended to prevent your bike from falling over when it is parked. The kickstand should be chosen according to the kind of use that it will get.



g

Your MERIDA dealer would be glad to advise you in detail about a suitable type of kickstand. Have a kickstand installed by your MERIDA dealer.



h

Mudguards/wheel protections

If you want to mount mudguards on your MERIDA bike, ask your MERIDA dealer for advice. There are removable mudguards (h), also referred to as clip-on mudguards, as well as firmly attached models that provide more protection.

Retrofittable mudguards for a fix fastening are usually made of plastics and are secured in the correct position by means of additional stays. The length of the stay is perfect when the bottom edge of the mudguard runs at an approx. distance of 15 mm in parallel to the tire.

In the case of a MERIDA bike with suspension, you have to make sure the mudguards do not collide with the tire when the rear shock is fully compressed.

For safety reasons the front wheel stays must have security fastenings. They prevent the tire from being blocked by impurities taken up by the front wheel from the ground. In this case the security fastening frees the stay and hereby prevents a possible accident. The plug connection can easily be refastened.



Damaged mudguards should be replaced in any case. Risk of an accident!

Transporting baggage

There are various ways of carrying baggage on your MERIDA bike. Your choice will primarily depend on the weight and volume of the baggage and on the bike you want to use. Using a rucksack (a) is a convenient way of transporting baggage on a bike.

You can also use pannier racks or handlebar bags, but some mountain bike models do not allow the mounting of these accessories. If you are in doubt or if you have any questions, contact your MERIDA dealer.

Some hardtail mountain bikes can be fitted with pannier racks (b). Ask your MERIDA dealer for the fixing points and suitable pannier racks.

In general, we recommend that you do not fasten any baggage to suspension forks.

It is advisable to carry baggage in stable pannier bags with a very low center of gravity. When buying bags, make sure they are watertight so that your belongings are protected and you will not have any unpleasant surprises after the first rain shower.



Do not overload your MERIDA bike. Follow the details given in the table in the chapter "Intended use" and observe the maximum permissible load printed or imprinted on the pannier rack.



a



b



c



d



Adjust the suspension fork (c) and the tire pressure (d) to the additional load.



Baggage generally changes the riding characteristics of your MERIDA bike and increases your stopping distance! Therefore, practice riding a loaded bike in a place free of traffic.



Please contact your MERIDA dealer before attaching pannier bags to your MERIDA pedelec.

Taking children with you

The only possible and legal way of transporting kids by bike is in special child-carrier seats (e) or trailers (f). Contact your MERIDA dealer.



Only buy tested child seats, child trailers, and kids' bike towing devices (e.g. DIN/GS tested systems) and ensure that they are properly mounted. The manuals of the manufacturers included in the delivery of the system provide detailed information in this regard.

Child seats

Most MERIDA mountain and cross bikes are not designed for child seat mounting. This applies in particular to those with very light frames. Ask your MERIDA dealer for advice and have a look at the bike card. Also read the operating instructions of the manufacturers which were supplied with the child seat.



Child trailers



If you want to use your MERIDA bike or pedelec to tow a trailer (g), please check whether it is designed accordingly. Have a look at the bike card or ask your MERIDA dealer for advice.



Always secure the little passengers with the seat belt, as uncontrolled movements of the child can make the MERIDA bike or the trailer topple over.



Make sure the child you are taking with you always wears a suitable helmet. A trailer is an insufficient protection in the event of an accident. Keep in mind that you should always wear a helmet, as well.



Please note that your stopping distance increases due to the additional load of the child trailer.

Kids' bike towing devices/trailer systems



If you want to use your MERIDA bike to mount a towing device **(a+b)**, please check whether it is designed for such a device. If in doubt, ask your MERIDA dealer.



well!

Make sure your child wears a helmet even when riding on a coupled or attached bike. Set a good example by wearing a helmet, as



If you want to use your MERIDA pedelec or speed pedelec to mount a towing device, please check whether it is designed for such a device. If in doubt, ask your MERIDA dealer.



Transporting the MERIDA bike or pedelec

By car

Nearly every car accessory dealer and car company offers carrier systems **(c)** that allow the transport of a bike without disassembly.

The usual design involves rails fixed to the roof of the car onto which the bikes are fixed with clamps gripping the down tubes. This can, however, result in irreparable damage to the frame. High-end, very thin-walled aluminum or carbon fiber frames are particularly susceptible to this kind of damage. Due to the material properties of carbon fiber, you may not see severe damage at first sight, but it can result in an unforeseeable severe accident at a later date. There are, however, special suitable models available in the car accessory trade.

Rear carriers are becoming more and more popular. Their big advantage over roof carriers is that you do not have to lift up the bike so high to attach it. Make sure the clamps used do not cause any damage to the fork or frame. Risk of breakage!

Whatever system you opt for, make sure it complies with the relevant safety standards of your country, such as the GS mark!

Read the operating instructions of your bike carrier and comply with the maximum load capacity and recommended or prescribed driving speed. If applicable, comply with the required supporting load on the trailer hitch.



Make sure to remove all parts of your MERIDA bike (tools, pannier bags (d-f), child seats (g) etc.) which may come loose during transport. Risk of an accident!



Do not buy a carrier on which the MERIDA bike has to be mounted upside down, i.e. with the handlebars and saddle fixed face down to the carrier. This way of fastening the bike exposes handlebars, stem, saddle and seat post to extreme stress during transport. Do not opt for a carrier system with crank arm fit. Risk of breakage!



Check whether your MERIDA bike is properly fastened before and at regular intervals during the journey. A MERIDA bike that detaches from the carrier system may endanger other road users.



Always secure the MERIDA bike or its components when putting it/them into the interior of your car. Parts shifting around can impair your safety.



Most clamps are a potential source of damage to large-diameter frame tubes that are not designed to be fixed in such clamps! Do not use such systems with carbon frames.



Please make sure the lights and the number plate of your car are not hidden from view. For some carriers, a second exterior rear view mirror is required by the road traffic regulations.



Bear in mind that your car has a greater overall height with the bike on it. Measure the overall height and place a sign stating the height somewhere in the cockpit or on the steering wheel so that it can be easily seen.



If your bike has disc brakes, be sure to mount the safety locks before transporting your MERIDA bike with the wheels dismantled.



Pull the brake lever and secure it with a strong elastic strap (h) when transporting a MERIDA bike with hydraulic disc brakes.

By public transport

In the cities the regulations for taking MERIDA bikes by public transport differ. There are e.g. some places where you are only allowed for travel with your MERIDA bike during off-peak hours and with an additional bicycle ticket. Inform yourself in time about the regulations of carrying the bike before you start the trip!



Remove, if necessary, any heavy or bulky pannier bags and baggage for easier boarding and disembarking of the train.



Before you start your trip inform yourself in time about the conditions of carriage and also observe the regulations and rules about bike transport in the countries through which you intend to travel.



a



b



c



d

By plane

If you want to take your MERIDA bike with you when you go on a trip by plane, pack it in an appropriate bicycle suitcase (a) or in a bicycle cardboard box that you can obtain from your MERIDA dealer. Special bike bags often do not provide sufficient protection for your MERIDA bike.

Pack the wheels (in particular carbon wheels) in special wheel bags (b) to protect them inside the suitcase or cardboard box. Do not forget to take the necessary tools, a torque wrench and bits, carbon assembly paste and these operating instructions with you to be able to assemble your MERIDA bike and to get it ready for use at your destination.



If your MERIDA bike has disc brakes, be sure to mount the safety locks (c) before transporting the bike with the wheels dismantled.



Pull the brake levers and secure them with a strong rubber band (d).

What to bear in mind when transporting your MERIDA pedelec

By car

MERIDA pedelecs can be transported like conventional bikes outside or inside the car **(e)**. Always make sure the MERIDA pedelec is securely fastened outside or inside the car and check the fastenings regularly. In addition, you should always remove the battery from your MERIDA pedelec **(f+g)** prior to fastening it outside the car. Stow the battery and, if applicable, a removable display unit, inside the car and secure it appropriately to avoid any damage in transit.

Protect the connections of the rechargeable battery against rain, wetness, moisture and dirt during the journey, e.g. with a plastic bag **(h)**.



The weight distribution on pedelecs differs markedly from the weight distribution on bikes without drive assistance. A pedelec is markedly heavier than a bike without drive assistance. For this reason parking, pushing, lifting and carrying the MERIDA pedelec is more difficult. Bear this in mind when loading your pedelec into a car and unloading it or when mounting it on a bicycle carrier system.



Before transporting several pedelecs with a roof mounting or a rear mounting carrier system, inform yourself about the maximum load capacity of the bike carrier and the maximum load of the trailer hitch. Keep in mind that the weight of a pedelec is higher than the weight of a bike without drive. It could be that you can only transport one or two pedelecs instead of three bikes without drive.



Make sure to remove all movable and loose parts and above all the rechargeable battery, if possible, the control element and the cycle computer on the handlebars before transporting the pedelec inside or outside the car. If you transport your MERIDA pedelec without its battery on a bike carrier system, protect the connections against water, moisture and dirt, e.g. with a plastic bag.



If necessary, inform yourself about the laws and regulations concerning bike/pedelec transport in the countries that you intend to transit during your journey. The regulations e.g. with regard to the marking, differ from country to country.



For more information see the system instructions of your drive manufacturer on this MERIDA CD-ROM.

By train / By public transport

MERIDA pedelecs can be transported in the same way as conventional bikes by public transport.



If the rechargeable battery of your MERIDA pedelec is mounted to the down tube or to the pannier rack, you can remove the battery for an easier boarding and disembarking (a+b).



Before you start your trip, inform yourself in time about the conditions of carriage and also observe the regulations and rules about bike and pedelec transport in the countries through which you intend to travel.



By plane

If you intend to take your MERIDA pedelec by plane or to dispatch it by a forwarding agent, you have to observe particular packing and labeling requirements for rechargeable batteries which are considered as hazardous goods. Contact the airline, an expert for hazardous items or the forwarding agent in time.



Contact the airline with which you intend to travel in time and inform yourself about conditions and possibilities of taking your MERIDA pedelec with you.

General notes on care and servicing

Maintenance and servicing

Your MERIDA dealer will have assembled and adjusted your MERIDA bike ready for use when you come to collect it. Nevertheless, your MERIDA bike needs regular servicing (e). Have your local MERIDA dealer do the scheduled maintenance work. This is the only way to ensure that all components function safely and reliably for many miles.

The bike will be due for its first service after 100 to 300 kilometers, 5 to 15 hours of initial use or four to six weeks. The bedding-in phase typically involves spokes slightly losing tension or gears coming out of adjustment, so there is every reason to have your MERIDA dealer service the MERIDA bike at this stage. This bedding-in process is unavoidable. Therefore, remember to make an appointment with your MERIDA dealer to have your new MERIDA bike inspected. This first service is very important for both functioning and durability of your MERIDA bike.

It is advisable to have your MERIDA bike serviced regularly by your MERIDA dealer after the bedding-in phase. If you ride a great deal on poor road surfaces or cross-country, it will require correspondingly shorter service periods. The off-season during the winter months is a very good time to take your MERIDA bike to your MERIDA dealer for the annual inspection, as they will have plenty of time for you and for servicing.



e



f



g



h

The intended use of the MERIDA bike includes regular servicing and the replacement of wearing parts in time, e.g. chains, brake pads or Bowden and brake cables (f), and therefore has an influence on the warranty and the guarantee, as well.

For more information see the chapter "Service and maintenance schedule" and the instructions of the component manufacturers on this MERIDA CD-ROM.



Service and repairs are jobs best left to your MERIDA dealer. If you have your bike serviced by anyone else than an expert, you run the risk that parts of your MERIDA bike will fail. Risk of an accident! When working on your MERIDA bike restrict yourself to jobs for which you have the suitable tools, e.g. a torque wrench (g), and the necessary knowledge.



If a component needs to be replaced, make it a rule to only use original spare parts (h). Wearing parts of other manufacturers, e.g. brake pads or tires that are not of identical dimension, may render your MERIDA bike unsafe. Risk of an accident!

Cleaning and caring for your MERIDA bike or pedelec

Dried sweat, dirt and salt from riding during the winter or in sea air can harm your MERIDA bike. You should therefore make it a habit of cleaning all components at regular intervals **(a)**.

Avoid cleaning your bike with a high-pressure cleaner. The high-pressure jet is likely to enter bearings by passing through the seals and dilute the lubricants hereby increasing the friction. This destroys and impairs the functioning of the bearing races in the long term. High-pressure jets are also likely to remove frame stickers. The electronics could be damaged in the case of pedelecs **(b)**.

A much more gentle way of cleaning your bike is with a low-pressure water jet or a bucket of water and a sponge or a large brush. Cleaning your bike by hand has another positive side-effect: you may discover defects in the paint as well as worn or defective components at an early stage.

Check the chain for wear and relubricate after cleaning and drying **(c)** (see the chapter "Chain – Care and wear" and the instructions of the component manufacturers on this MERIDA CD-ROM).

Wipe dry the sliding surfaces of the suspension fork and apply special spray. Apply a coat of standard hard wax on painted, metal and carbon surfaces (except from brake surfaces and brake discs). Polish the waxed surfaces after drying to give them a nice shine.



a



b



c



d

Keep cleaning agents and chain oil clear of the brake pads, brake discs and rim sides (braking surfaces). Otherwise the brake could fail. Never grease or lubricate the clamping areas of a frame made of carbon, e.g. handlebars, stem, seat post and seat tube. Once greased, carbon components may never again ensure reliable clamping!



Remove the battery and/or the display before beginning work on your pedelec (e.g. inspection, repair, assembly, maintenance, work on the drive, etc.). In case of unintentional activation of the drive system there is the risk of injury!



While cleaning, watch out for cracks **(d), scratches, dents as well as deformed or discolored material. Have defective components replaced immediately and touch up paint defects. If you are in doubt or if you have any questions, contact your MERIDA dealer.**



Only use petroleum-based solvents for cleaning tough oil or grease stains from paint and carbon surfaces. Never use degreasing agents containing acetone, methyl chloride or the like, or solvent-containing, non-neutral or chemical cleaning agents that could attack the surface!



Do not clean your MERIDA bike with a high-pressure cleaner or a water jet and if you do, be sure to keep it at a distance. Do not aim at the bearings.



Keep in mind that the auxiliary drive of your MERIDA pedelec may lead to partly higher wear than you are used to. This applies in particular to the brakes and the tires and in the case of bottom bracket drives to the chain and the sprockets.



Please note that in the case of speed pedelecs only certain components are allowed to be replaced to provide insurance cover.



A rechargeable battery that has reached the end of its service life may not be disposed of in the normal household rubbish (e). Bring the rechargeable battery to the dealer, where you buy your new one. If in doubt, ask your MERIDA dealer.



For more information see the system instructions of your drive manufacturer on this MERIDA CD-ROM.

Safekeeping and storing your MERIDA bike

If you regularly look after your MERIDA bike during the season, you will not need to take any special measures when storing it for a short time, apart from securing it against theft. Store your bike in a dry, well aerated place.

If you want to store your MERIDA bike for a longer period of time, e.g. over the winter months, please observe the following things: Inflated inner tubes tend to gradually lose air when the bike is not used for a long time. If your MERIDA bike is left standing on flat tires for an extended period, this can cause damage to the structure of the tires. It is therefore better to hang the wheels or



the entire MERIDA bike or to check the tire pressure regularly (f). Clean your MERIDA bike and protect it against corrosion. Your MERIDA dealer has special maintenance products, e.g. spray wax (g).

Remove the seat post (h) and let moisture that may have entered dry. Spray a little finely atomized oil into the metal seat tube. However, do not apply oil in a carbon seat tube. Shift the gear to the smallest chainwheel and the smallest sprocket. This relaxes the cables and the springs.



There are hardly any waiting times at your MERIDA dealer during the winter months. In addition, many of the MERIDA dealers offer an annual check-up at a special price. Benefit from the idle time and ask your MERIDA dealer to do the scheduled maintenance work!



For more information on the safekeeping and storing of your MERIDA pedelec see the chapter "Useful information for proper handling of the rechargeable battery" and the system instructions of your drive manufacturer on this MERIDA CD-ROM.

Servicing MERIDA speed pedelecs – Special features

Please note that in the case of MERIDA speed pedelecs only certain components are allowed to be replaced, otherwise there is the risk of losing the operating license and the insurance cover. Only use spare parts confirmed by experts' reports on the approval for your MERIDA speed pedelec. As an alternative you may also go through an individual approval process by a technical inspection authority of your country. To be on the safe side, be sure to only use original spare parts.

Components which must not be replaced or only after a type test, e.g. carried out by a technical inspection authority: Frame, fork, drive unit, battery, tires, rims, brake system, front and rear light, kickstand, handlebars, stem, command console/display (a) and license plate frame.

The following components can be replaced, even without any further test: Pedals (b) (pedal reflectors are compulsory), mudguards (with rounded edge at the front mudguard), pannier rack, saddle (c) and rubber grips on the handlebars, gear components (provided the highest transmission remains identical), seat post (d), chain, headset, inner tube and hub as well as bell and rear view mirror (when replaced by equivalent models).



In the case of MERIDA speed pedelecs be sure to only assemble original spare parts, otherwise the operating license expires.



Drive maintenance and care

The motor, the rechargeable battery and the drive HMI and/or display are mainly maintenance free, except for the battery charging which is necessary regularly. From time to time the dirt and oil needs to be cleaned off your chain with an oily rag. Special degreasers are not necessary; they even have a damaging effect.

Having cleaned the chain as thoroughly as possible, apply chain oil, wax or grease to the chain links. To lubricate the chain, drip the lubricant onto the rollers of the lower run of the chain while you turn the crank. Once this is done, turn the cranks a few more times; then let the MERIDA pedelec rest for a few minutes so that the lubricant can disperse. Finally wipe off excess lubricant with a rag so that it does not spatter around during riding or can collect road dirt.



A rechargeable battery that has reached the end of its service life may not be disposed of in the normal household rubbish. Bring the rechargeable battery to the dealer, where you buy your new one. If in doubt, ask your MERIDA dealer.



The drive is not approved for steam cleaning, high-pressure cleaning or cleaning with a water hose. The contact of water with the electronics or the drive can destroy the units. The individual drive components can be cleaned with a soft rag and neutral detergents. You may use a moist rag, but not excessive water. Do not submerge the rechargeable battery!

Service and maintenance schedule

It is advisable to have your MERIDA bike serviced regularly after the bedding-in phase. The schedule given in the table below is a rough guide for cyclists who ride their bike between 1,000 and 2,000 km or 50 to 100 hours of use a year.

If you consistently ride more or if you ride a great deal on poor road surfaces, the service intervals will shorten accordingly.

Component	What to do	Before every ride	Monthly	Annually	Others
Lighting	Check function	x			
Tires	Check pressure	x			
	Check tread and side walls		x		
Brakes (rim brakes)	Check lever travel, wear of brake pads, position of pads relative to rim; test brakes in stationary	x			
Brakes (hydraulic rim brakes)	Check lever travel, wear of brake pads, position of pads relative to rim, test brakes in stationary, check seals	x			
Brakes (drum/roller)	Lever travel, test brakes in stationary	x			
Brakes, brake pads (rim brakes)	Clean		x		
Brake cables/pads/lines	Visual inspection		x		
Brakes (disc brakes)	Lever travel, brake pads, seals, test brakes in stationary	x			
	Replace liquid (DOT-liquids)			•	
Suspension forks	Check and retighten bolts, if necessary			•	
	All-inclusive service (change oil)			•	
Rims (of rim brakes)	Check thickness, replace if necessary				• at the latest after 2 nd set of brake pads
Fork (rigid)	Check and replace, if necessary				• at least every 2 years
Bottom bracket	Check for bearing play		x		
	Dismount and regrease (cups)			•	
Chain	Check and grease, if necessary	x			
	Check wear, replace, if necessary derailleur gears				• after 1,000 km or or 50 hours of use
Telescopic seat post	Service			x	
Crank	Check and retighten, if necessary		x		

Component	What to do	Before every ride	Monthly	Annually	Others
Painted/anodized/carbon surfaces	Impregnate				x at least every 6 months
Wheels/spokes	Check for trueness and tension True or retighten		x		• if necessary
Handlebars and stem (aluminum and carbon)	Check and replace, if necessary				• at the latest every 2 years
Headset	Check for bearing play Regrease		x	•	
Metal surfaces	Polish (except: rim sides of rim brakes, brake discs)				x at least every 6 months
Hubs	Check for bearing play Regrease		x	•	
Pedals (all)	Check for bearing play		x		
Pedals (clipless)	Clean and grease locking mechanism		x		
Seat post/stem	Check bolts Dismount and re-lubricate Carbon: new assembly paste (no grease!)		x	•	
Front/rear derailleur	Clean and grease		x		
Quick-releases/thru axles	Check seat	x			
Bolts and nuts (Multi-speed hubs, mudguards etc.)	Check and retighten, if necessary		x		
Valves	Check seat	x			
Cables (gears/brakes)	Disassemble and regrease			•	

If you have a certain degree of mechanical skills, experience and suitable tools, such as a torque wrench, you should be able to do the checks marked **x** by yourself. If you come across any defects, take appropriate measures without delay. If you are in doubt or if you have any questions, contact your MERIDA dealer.

Jobs marked • are best left to your MERIDA dealer.



For your own safety, bring your MERIDA bike to your MERIDA dealer for its first inspection after 100 to 300 kilometers, 5 to 15 hours of initial use or four to six weeks, and at the very latest after three months.

Recommended torque settings

All bolted connections of the MERIDA bike components have to be tightened carefully and checked regularly to ensure the safe and reliable operation of the MERIDA bike. This is best done with a torque wrench that disengages at the desired torque value or a click-type torque wrench. Tighten carefully by approaching the prescribed maximum torque value in small steps (0.5 Nm increments) and check in between the proper fit of the component. Never exceed the maximum torque value indicated by the manufacturer!

Where no maximum torque setting is given start with 2 Nm. Observe the indicated values and observe the values on the components and/or in the operating instructions of the component manufacturers on this MERIDA CD-ROM.

Component	Bolted connections	Shimano ¹ (Nm)	SRAM/Avid ² (Nm)	Tektro ³ (Nm)	TRP ⁴ (Nm)
Rear derailleur	Mount (on frame/derailleur hanger)	8 - 10	8 - 10		
	Cable clamp	5 - 7	4 - 5		
	Pulley wheels	3 - 4			
Front derailleur	Mount on frame	5 - 7	5 - 7		
	Cable clamp	5 - 7	5		
Shifter	Mount on handlebars	5	2.5 - 4		
	Hole covering	0.3 - 0.5			
Brake lever unit	Mount on handlebars	6 - 8	5 - 7	6 - 8	
	Time trial brake lever			5 - 7	
Hub	Quick-release lever	5 - 7.5			
	Locknut for bearing adjustment of quick-release hubs	10 - 25			
	Sprocket cluster lock ring	29 - 49	40		
Internal gear hub	Hub axle nut	30 - 45			
Crank	Crank mount (grease-free square-head)	35 - 50			
	Crank mount (Shimano Octalink)	35 - 50			
	Crank mount (Shimano Hollowtech II)	12 - 15			
	Crank mount (Isis)		31 - 34		
	Crank mount (Giga X Pipe)		48 - 54		
	Chainwheel mount	8 - 11	12 - 14 (steel) 8 - 9 (alu)		
Sealed cartridge bearing	Shell (square-head)	49 - 69			
	Shell (Shimano Hollowtech II, SRAM Giga X Pipe)	35 - 50	34 - 41		
	Octalink	50 - 70			

Component	Bolted connections	Shimano ¹ (Nm)	SRAM/Avid ² (Nm)	Tektro ³ (Nm)	TRP ⁴ (Nm)
Pedal	Pedal axle	35			
Shoe	Cleat	5 - 6			
	Spike	4			
Brake (V-brake)	Cable clamp	6 - 8	6 - 8	6 - 8	6 - 8
	Brake shoe mount	6 - 8	6 - 8	6 - 8	6 - 8
	Brake pad fixing	1 - 2			
	Brake boss frame/fork			8 - 10	

¹www.shimano.com ²www.sram.com ³www.tekro.com ⁴www.trpbrakes.com

Recommended torque settings for disc brakes and hydraulic rim brakes

Component	Shimano ¹ (Nm)	Avid ² (Nm)	Tektro ³ (Nm)	TRP ⁴ (Nm)	Magura HS ⁵ (Nm)
Brake caliper mount on frame/fork	6 - 8	9 - 10 (IS adapter) 8 - 10 (brake caliper)	6 - 8	6 - 8	6
Brake lever unit on handlebars					
- Single-bolt clamp	6 - 8	Discrete Clamp Bolt/ Hinge Clamp Bolt/ XLoc Hinge Clamp Bolt: 5 - 6 Pinch clamp bolt: 2.8 - 3.4 Split Clamp Bolts / Match Maker Bolts: 3 - 4	5 - 7		4
- Two-bolt clamp		4 - 5			
Union screws of cable at grip and normal cable at brake caliper	5 - 7	5			4
Brake cable connector at brake caliper (disc tube cable)	5 - 7				
Expansion tank cap	0.3 - 0.5				
Bleeding device brake caliper	4 - 6		4 - 6		

Component	Shimano ¹ (Nm)	Avid ² (Nm)	Tektro ³ (Nm)	TRP ⁴ (Nm)	Magura HS ⁵ (Nm)
Bleeding device brake lever			2 - 4		
Brake disc fixing (6-holes)	4	6.2	4 - 6	6 - 8	
Brake disc fixing (centerlock)	40				
Hose (union nut) direct connection					4
Slave cylinder (bleeder screw)					4
Brake pad retainer at brake caliper			3 - 5		
Cable clamp at brake caliper				4 - 6	

¹ www.shimano.com ² www.sram.com ³ www.tekro.com ⁴ www.trpbrakes.com ⁵ www.magura.com

These values are reference values of the above-mentioned component manufacturers. Observe the values in the instructions of the component manufacturers on this MERIDA CD-ROM.

These values do not apply to the components of other manufacturers.



Due to the unmanageable number of components on the market, MERIDA is not in a position to foresee every product that will be replaced or newly assembled by third parties. Therefore MERIDA denies any liability for such kind of additions or modifications with regard to compatibility, torque values etc. Whoever assembles or modifies the MERIDA bike shall ensure that the bike was assembled according to the state-of-the-art in science and technology.

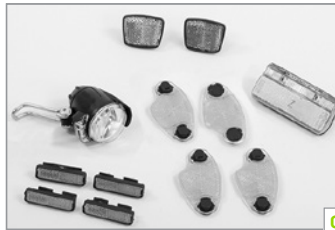


Some components have the maximum permissible torque values printed on them. Use a torque wrench and never exceed the maximum torque value! If you are in doubt or if you have any questions, contact your MERIDA dealer.

Legal requirements for riding on public roads

If you use your bike for riding on public roads **(a+b)**, it has to be equipped according to the regulations of your country.

Pay particular attention to your bicycle being equipped with the prescribed set of lights **(c)** and reflectors **(d)**. Ask your MERIDA dealer to inform you about the road traffic regulations in force in your country. Make yourself familiar with the road traffic regulations for riding on public roads and off-road.



Warranty and guarantee

Your MERIDA bike was manufactured with great care. Normally it is delivered to you by your MERIDA dealer fully assembled.

As direct purchaser you have full warranty rights within the first two years after purchase. Please contact your MERIDA dealer in the event of defects.

To ensure a smooth handling of your claim, it is necessary to present your receipt, your bike card and the handover report. Therefore, be sure to keep these documents in a safe place.

To ensure a long service life and good durability of your MERIDA bike, use it only for its intended purpose (see the chapter "Intended use"). Please observe the permissible load specifications as specified on the bike card. Be sure to follow the mounting instructions of the manufacturers (above all, the torque values of the bolts) as well as the prescribed maintenance schedule.

Observe the checks and routines listed in this translation of the original MERIDA operating instructions, in your comprehensive MERIDA user manual, the system instructions of your drive manufacturer and the instructions of the component manufacturers on this MERIDA CD-ROM (see the chapter "Service and maintenance schedule" in your comprehensive MERIDA user manual) or the replacement of safety-relevant components, such as handlebars, brakes etc, if necessary.



Keep in mind that retrofitted accessories can impair the functioning of your MERIDA bike. If you are in doubt or if you have any questions, contact your MERIDA dealer.



The law referring to full warranty rights is only valid in the countries where the law has been ratified according to the renewed European regulations. Please inform yourself about the situation in your country.

A note on wear

Some components of your MERIDA bike are subject to wear due to their function. The rate of wear will depend on care and maintenance and the way you use your MERIDA bike (mileage, riding in the rain, dirt, salt etc.). MERIDA bike that are often left standing in the open may also be subject to increased wear through weathering.

The components below require regular care and maintenance. Nevertheless, sooner or later they will reach the end of their service life, depending on conditions and intensity of use. Parts that have reached their limit of wear must be replaced:

- rechargeable battery
- drive chain
- brake pads
- brake fluid (DOT)
- brake discs/rotors
- brake cables
- brake cable housings
- seals of suspension elements
- rim sides (of rim brakes)
- rims (of rim brakes)

- incandescent bulbs/LED
- rubber grips
- chainwheels
- chainstay protection
- lamps
- tires
- sprockets
- saddle covering
- pulleys
- lubricants



Ask your MERIDA dealer about any additional guarantee given by the manufacturer of your MERIDA bike and insist on having it as printed version.

Guarantee on MERIDA bikes

Your MERIDA bike is guaranteed (as of date of purchase to the initial buyer):

- Lifetime guarantee against rupture of all carbon and aluminum frames.
- 5 years for carbon and aluminum rigid forks
- 3 years against frame rupture of all full-suspension models from a spring travel of 140 mm on
- 1 year against frame rupture of all dirt jump models and MERIDA labeled parts
- 1 year guarantee on paint and stickers

In a guarantee-activating event MERIDA reserves the right to provide a bike of the current successor model in an available color, or if no such bike is available, a higher grade model.

Guarantee claims for shock absorbers, suspension forks and other branded accessories will not be processed by MERIDA, but by the component manufacturers' national distributors.

Your direct contact in any case should be your MERIDA dealer, who will be pleased to answer your inquiries.

The manufacturer's guarantee only applies to claims made by the initial buyer and substantiated by presenting the customer's receipt, the delivery receipt and the bike card stating the date of purchase, dealer address and model and frame number. It can also be claimed through an online registration at www.merida-bikes.com (not available in all countries) by the initial buyer.

Guarantee claims will only be accepted, if the bike has been used for none other than its intended use, had an inspection during its first 500 km or the first six months after purchase, has been fitted with none other than original spare parts or accessories and had its suspension systems serviced by a MERIDA dealer once a year at least.

The guarantee does not cover labor and transport costs, nor does it cover follow-up costs resulting from defects.

The guarantee does not apply to bikes that have been used in competition, for jumping or that have been subjected to any other kind of overstress. Coverage for competitive use is only provided in the case of carbon frames for the types road bike, cyclo-cross, mountain bike hardtail and full suspension up to 100 mm.

The guarantee does not apply to bikes that have been used for jumping or subjected to any other kind of overstress. It does not cover damage resulting from wear, neglect (insufficient care and maintenance), falls/accidents, overstress caused by overloading, incorrect mounting or improper treatment or resulting from changes to the bike in connection with the mounting or alteration of additional components.

Diligent compliance with the manufacturers' mounting instructions and maintenance intervals as prescribed in this manual are crucial to a long service life and good durability of the bicycle components. Non-observance of the assembly instructions or maintenance intervals renders the guarantee null and void. Please observe the checks described in this manual as well as all instructions concerning the regular replacement of safety-relevant components, such as the handlebars etc.

These guarantee conditions are voluntary benefits of MERIDA. Moreover, the buyer may benefit from additional legal rights which vary from country to country. To find out more just ask your MERIDA dealer.

Remarks for Australian MERIDA customers

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced, if the goods fail to be of acceptable quality and the failure does not amount to a major failure. The benefits to the consumer given by this warranty are in addition to other rights and remedies of the Australian Consumer Law in relation to the goods and services to which this warranty relates.

In case of any inquiries, please contact your national distributor; visit www.merida.com to find the address.

These provisions of the guarantee are applicable as of model year 2015.

MERIDA Industry Co., LTD.
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Yuanlin Taiwan R.O.C.
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Fax: +886-4-8527881
www.merida-bikes.com



Service schedule



1st service - After 100 – 300 kilometers or 5 – 15 hours of use at the latest or after three months from date of purchase

Order no.: Date:

Replaced or repaired parts:

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Stamp and signature
of the MERIDA dealer:

2nd service – After 2,000 kilometers or 100 hours of use at the latest or after one year

Order no.: Date:

Replaced or repaired parts:

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Stamp and signature
of the MERIDA dealer:

3rd service – After 4,000 kilometers or 200 hours of use at the latest or after two years

Order no.: Date:

Replaced or repaired parts:

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Stamp and signature
of the MERIDA dealer:

4th service – After 6,000 kilometers or 300 hours of use at the latest or after three years

Order no.: Date:

Replaced or repaired parts:

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Stamp and signature
of the MERIDA dealer:

5th service – After 8,000 kilometers or 400 hours of use at the latest or after four years

Order no.: Date:

Replaced or repaired parts:

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Stamp and signature
of the MERIDA dealer:

6th service – After 10,000 kilometers or 500 hours of use at the latest or after five years

Order no.: Date:

Replaced or repaired parts:

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Stamp and signature
of the MERIDA dealer:

7th service – After 12,000 kilometers or 600 hours of use at the latest or after six years

Order no.: Date:

Replaced or repaired parts:

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Stamp and signature
of the MERIDA dealer:

8th service – After 14,000 kilometers or 700 hours of use at the latest or after seven years

Order no.: Date:

Replaced or repaired parts:

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Stamp and signature
of the MERIDA dealer:

9th service – After 16,000 kilometers or 800 hours of use at the latest or after eight years

Order no.: Date:

Replaced or repaired parts:

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Stamp and signature
of the MERIDA dealer:

10th service – After 18,000 kilometers or 900 hours of use at the latest or after nine years

Order no.: Date:

Replaced or repaired parts:

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Stamp and signature
of the MERIDA dealer:

11th service – After 20,000 kilometers or 1,000 hours of use at the latest or after ten years

Order no.: Date:

Replaced or repaired parts:

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Stamp and signature
of the MERIDA dealer:

12th service – After 22,000 kilometers or 1,100 hours of use at the latest or after eleven years

Order no.: Date:

Replaced or repaired parts:

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.....

Stamp and signature
of the MERIDA dealer:

Bike card

Manufacturer _____

Model _____

Frame no. _____

Color _____

Drive system Mid-mounted motor

Battery model _____

Key no. _____

Voltage (Volt) _____

Ampere-hour (AH) _____

Capacity (watt hours) _____

Suspension fork - Manufacturer _____

- Model _____

- Serial no. _____

Frame type _____

Frame size _____

Size of wheels and tires _____

Special features _____

Intended use

- Category 0 Category 3
- Category 1 Category 4
- Category 2 Category 5

Permissible overall weight

- MERIDA bike, rider and baggage _____ kg
- Pannier rack yes no
- Permitted overall load _____ kg
- Child seat permitted yes no
- Trailer permitted yes no
- Permissible trailer load _____ kg

Brake lever

Right lever

Brake assignment

Front wheel brake

Rear wheel brake

Left lever

Front wheel brake

Rear wheel brake



Read the chapter "Before your first ride" in the translation of these original MERIDA operating instructions.

Stamp and signature of the MERIDA dealer

(Tip for the MERIDA dealer: Copy the bike card and the handover report and keep one copy in your customer file. Send another copy to the bike manufacturer)

Handover report



The above-described MERIDA bike was delivered to the customer ready for use, i.e. after its final assembly, inspection and functional check as described below (additionally required routines in parentheses).

- Lighting
- Brakes front and rear
- Suspension fork (adjusted to suit customer)
- Wheel set (trueness/spoke tension/tire pressure)
- Handlebars/stem (position/bolts checked with torque wrench)
- Pedals (adjustment of release force if necessary)
- Saddle/seat post (height and position of saddle adjusted to suit customer, bolts checked with torque wrench)
- Gears (limit stops!)
- Bolted connections of attachment parts (checked with torque wrench)
- Other routines performed
- Test ride

MERIDA dealer

Last name _____

Street _____

City _____

Phone _____

Fax _____

E-Mail _____

Handover date, stamp and signature of the MERIDA dealer

The customer confirms with his signature that he received the MERIDA bike in proper condition along with the accompanying documents specified below and that he was instructed on the proper use of the MERIDA bike.

User manual/Operating instructions with MERIDA CD-ROM

Additional instructions

- Brake system
- Gear system
- Seat post, stem
- System instructions of the drive manufacturer
- Suspension seat post
- Suspension fork/rear shock
- Pedal system
- Others

Customer

Last name _____

First name _____

Street _____

ZIP code/city _____

Phone _____

Fax _____

E-Mail _____

Location, date, signature _____



M.O.R.E.[®]
BIKE

[MERIDA.com](https://www.merida.com)



MERIDA.com

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