MERIDA
USER MANUAL

ROAD BIKE EN 14781

Read at least pages 11-14 before your first ride!
Perform the functional check on pages 14-16 before every ride!
Observe the chapter “Intended use”, the service schedule,
the bike card and the handover report!

Components MERIDA road bike

Frame:

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

Frame:

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

Frame:

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

MERIDA user manual

This MERIDA user manual includes the following road bike types:

Road bikes
Triathlon bikes
Time trial machines
Cyclo-cross bikes

a

b

c

d

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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Table of contents

Components MERIDA road bike ... **2**
Some notes on this MERIDA user manual ... **8**
General safety instructions ... **9**
Intended use ... **11**
Before your first ride ... **12**
Before every ride ... **14**
After an accident ... **16**
How to use quick-releases and thru axles ... **19**
How to fasten components securely with a quick-release ... 20
How to fasten components securely with a thru axle ... 21
Adjusting the MERIDA bike to the rider ... **22**
Adjusting the saddle to the correct height ... **23**
Adjusting the height of the handlebars ... **24**
Stems for threadless systems, the Aheadset®-systems ... 25
Correcting the fore-to-aft position and horizontal tilt of the saddle ... **27**
Adjusting saddle position and tilt ... 27
Adjusting the brake lever reach on MERIDA road bikes ... **30**
What to bear in mind with MERIDA time trial handlebars of MERIDA triathlon and time trial machines ... 31
Adjusting the tilt of the handlebars and brake levers of MERIDA road racing machines and cyclo-cross bikes ... **31**
The brake system ... **32**
Rim brakes ... **33**
Racing/Side-pull brakes ... 33
Cross/Cantilever brakes ... 35
Adjusting the brake lever reach ... 37
Mechanical and hydraulic disc brakes ... **37**
Functioning and wear ... 37
Adjusting the brake lever reach ... 38
Checking and readjusting in the case of mechanical disc brakes ... 38
Checking and readjusting in the case of hydraulic disc brakes ... 39
The gears ... **41**
Derailleur gears ... **41**
Functioning and operation ... 41
Checking and readjusting ... 44
Adjusting the rear derailleur ... 44
Adjusting the limit stops ... 45
Adjusting the front derailleur ... 46
Shimano Di2 ... **47**
Adjustment and maintenance ... 47
Rechargeable battery ... 48
Campagnolo EPS ... **49**
Adjustment and maintenance ... 49
Rechargeable battery ... 50
Chain – care and wear ... **51**
Chain maintenance ... **51**
The wheels and the tires ... **52**
Tires, inner tubes, rim tape, inflation pressure ... **52**
Valves ... **54**
Rim trueness and spoke tension ... **54**
Carbon wheels ... **54**
Particularities of braking with carbon wheels ... 55

Tire puncture **56**
Dismounting wheels **56**
Clincher and folding tires **57**
Dismounting tires 57
Mounting tires 58
Tubular tires **59**
Dismounting tires 59
Mounting tires 59
Mounting wheels **62**
Special characteristics of carbon **63**
The headset **65**
Checking and readjusting **65**
Threadless headsets – Aheadset® **66**
Things worth knowing about your MERIDA road bike **67**
Cycling helmets and glasses **67**
Clothing **67**
The pedals and the shoes **68**
Accessories **69**
Bicycle locks 69
Puncture kit 70
Cycle computers 70
Aero or triathlon/time trial bars 70
Mudguards/wheel protections 70
Transporting baggage **71**
Taking children with you **71**
Transporting the MERIDA bike **72**
By car **72**
By public transport **73**
By plane **74**
General notes on care and servicing **74**
Maintenance and servicing **74**
Cleaning and caring for your MERIDA bike **75**
Safekeeping and storing your MERIDA bike **76**
Service and maintenance schedule **77**
Recommended torque settings **79**
Recommended torque settings for disc brakes and hydraulic rim brakes 80
Legal requirements for riding on public roads **82**
Warranty and guarantee **83**
A note on wear 83
Guarantee on MERIDA bikes 84
Service schedule **86**
Bike card **89**
Handover report **90**

Some notes on this MERIDA user manual

The illustrations on the first pages of the MERIDA user manual show a typical MERIDA road bike, a MERIDA triathlon bike and a MERIDA time trial machine. One of these MERIDA road bikes looks similar to the MERIDA road bike you have purchased. Today's road bikes come in various types that are designed for specific uses and fitted accordingly. This MERIDA user manual includes the following road bike types:

Road bikes **(a)**, triathlon bikes, time trial machines **(b)** and cyclo-cross bikes **(c)**

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 MERIDA operating instructions that deserves your special attention.

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b

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The described possible consequences will not be repeated in this MERIDA user manual every time one of the symbols appears.

This user manual is not intended to help you assemble a MERIDA road bike **(d)** from individual components, to repair it or to make a partly assembled MERIDA bike ready for use.

This MERIDA user manual is not applicable to any other than the displayed road bike types.

This MERIDA user manual together with this MERIDA CD-ROM complies with the requirements of the European standard EN 14781 for racing bicycles.

Also observe the instructions of the component manufacturers on this MERIDA CD-ROM.

General safety instructions

Dear MERIDA customer,

In purchasing this MERIDA bike **(e-g)** you have chosen a product of high quality. Each component of your new MERIDA road 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 road bike, its maintenance and operation as well as interesting information on bike design and engineering. Read this MERIDA user manual 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.

Therefore, before setting off on your new MERIDA road 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 road bike.

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Even a manual as big as an encyclopedia could not describe any possible combination of bicycle models and components or parts on the market. This MERIDA user manual therefore focuses on your newly purchased MERIDA road bike and standard components and provides useful information and warnings.

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

The information included here is not applicable to any other bicycle 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 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 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 road bike at all times. 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 road bike and never ride without having both hands on the handlebars.

a

b

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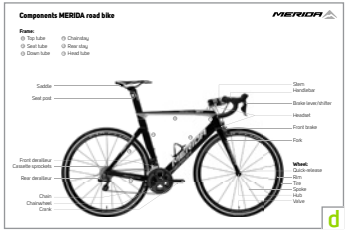


d

Observe the legal regulations for riding on public roads. These regulations may differ in each country. Only use your road bike on signposted and smooth, hard-surface roads **(c)** and bike lanes.

First we would like to familiarize you with the various components used on your MERIDA road bike. Please note the component descriptions on the front pages of this MERIDA user manual. There you will find a MERIDA road bike **(d)**, a MERIDA triathlon bike and a MERIDA time trial machine showing all the essential components. Leave the page unfolded as you read 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 road bike 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 1: Road bikes, triathlon bikes, time trial machines and cyclo-cross bikes

MERIDA road bikes (e), MERIDA triathlon bikes and **MERIDA time trial machines (f)** are intended to be used on public roads and trails with tarred or paved surface.

MERIDA cyclo-cross bikes/road racing machines (g) are also suitable for off-road cycling on gravel field and forest tracks, however, not for rough terrain. They are not suitable for mountain bike use, namely for all mountain, enduro, downhill, freeride and in bike parks.

Due to their design and fittings **MERIDA road bikes, MERIDA triathlon bikes**, **MERIDA time trial machines** and **MERIDA cyclo-cross 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.

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

Category 1: MERIDA bikes of this category are designed for riding on hard-surface roads where the wheels remain in permanent contact to the ground. In general, these are MERIDA road racing bikes with racing bars or straight handlebars, MERIDA triathlon or MERIDA time trial machines. The rider's maximum weight incl. baggage and bike should not exceed **120 kg**. Under certain circumstances this permissible maximum weight can be further limited by the component manufacturers' recommendations for use.

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.

Due to their design and fittings MERIDA road bikes, MERIDA triathlon bikes, MERIDA time trial machines and MERIDA cyclo-cross bikes/road racing machines 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.

Permissible overall weight:

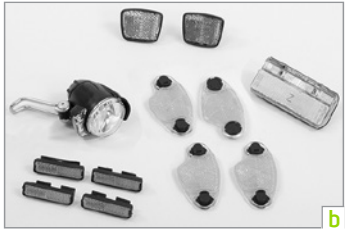
Your MERIDA road bike is designed for a maximum overall weight, including rider **(a)**, baggage and MERIDA road bike. The maximum overall weight is specified in the following table and in the bike card enclosed with these operating instructions; if it is not, then contact your MERIDA dealer.

Road bikes, triathlon bikes, time trial machines and cyclo-cross bikes/road racing machines: **120 kg**

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

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

For more information about the intended use of your MERIDA road 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 **(b)**. Ask your MERIDA dealer concerning the laws and regulations applicable in your country or in the country you intend to use your MERIDA road bike. Have your MERIDA road 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 **(c+d)**? 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.

3. Are you familiar with the type and functioning of the gears **(e)**? 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. Check whether your toes reach to the floor when you are sitting on the saddle **(f)**. 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 road bike is equipped with clipless or step-in pedals **(g)**: 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.

e

f

g

h

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

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

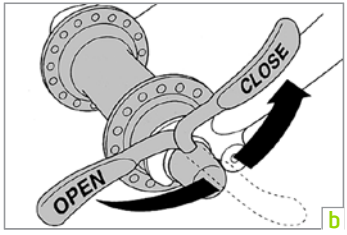
A lack of practice when using clipless pedals or too much spring tension in the mechanism can lead to a very firm connection, from which you cannot quickly step out! Risk of an accident!

In case you had a crash with your MERIDA road 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 road 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 once again your MERIDA road bike thoroughly. If you are in doubt or if you have any questions, contact your MERIDA dealer!

Before towing a trailer (a) with your MERIDA road bike, contact your MERIDA dealer.

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

a



b

c

d

Before every ride

Your MERIDA road 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 before every ride to exclude any malfunctioning that may be due to the transport of your MERIDA road bike or to changes a third person may have performed on your MERIDA road bike:

1. Are the quick-release levers **(b)**, thru-axles or nuts of the front and rear wheel, the seat post **(c)** 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 **(d)**? 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.

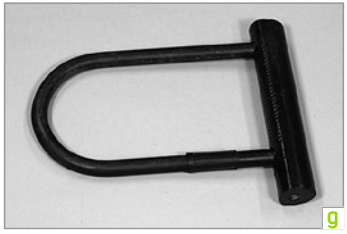
4. Test the brakes when stationary by firmly pulling the brake levers towards the handlebars **(e)**. The brake pads of rim brakes must hit the rim evenly with their entire surface without touching the tire during braking, in open condition or in between. Make sure you cannot pull the brake levers all 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 road 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.

e

f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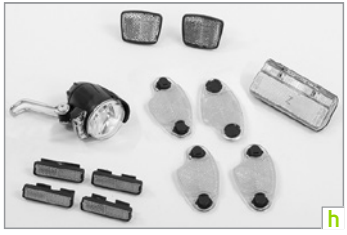
h

5. Let your MERIDA road bike bounce on the ground from a small height **(f)**. If there is any rattling, see where it comes from. Check the bearings and bolted connections, if necessary. Tighten them slightly, if necessary.

6. Do not forget to take a high quality D- **(g)** or chain lock with you on your ride. The only way to effectively protect your MERIDA road bike against theft is to lock it to an immovable object.

7. If you want to ride on public roads, make sure your MERIDA road bike is equipped according to the applicable regulations of your country **(h)**. 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".

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

Be aware that the distance you need to stop your bike increases, when you are riding with your hands on aero or triathlon handlebars (a). The brake levers are not always within easy reach.

Do not use your MERIDA road bike, if it fails at one of these points! A defective MERIDA road 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 road 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 road bike regularly for wear marks, scratches (b), 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 road bike regularly. In cases of doubt it is always best to replace components.

a

b

c

d

After an accident

1. Check whether the wheels are still firmly fixed in the drop-outs **(c)** 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 **(d)** 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 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 **(e)**. Briefly lean on the brake levers/shifters to make sure the handlebars are firmly fixed in the stem. Realign the components, if necessary, and gently tighten the bolts **(f)** to ensure a reliable clamping of the components.

   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 chainwheels and the sprockets. If your MERIDA road bike fell over to the chain side, verify the proper functioning of the gears. Ask somebody to lift your MERIDA road 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 **(g)**.

e

f

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   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 road 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 **(h)**. 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 road 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 road bike to detect any deformations, color changes or cracks.

Ride back very carefully by taking the shortest route possible, even if your MERIDA road 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 road bike thoroughly **(a)**. Damaged parts must be repaired or replaced. Ask your MERIDA dealer for advice.

For more information on carbon components see the chapter "Special characteristics of carbon" and the instructions of the component manufacturers on this MERIDA CD-ROM.

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.

a

b

c

d

If your MERIDA road bike is assembled with carbon components (b+c), 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 (d) of the rear derailleur after a fall or if your MERIDA road bike has toppled over.

How to use quick-releases and thru axles

Most MERIDA road bikes are fitted with quick-releases to ensure fast adjustments, assembly and disassembly. Be sure to check whether all quick-releases are tight before you set off on your MERIDA road 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 **(e)** on one side of the hub which creates a clamping force via a cam when you close it.

2. The tightening nut **(f)** 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.

e

f

g

h

Make sure the levers of both wheel quick-releases are always on the side opposite to the chain (g). 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 a MERIDA road bike without having checked first whether the wheels are securely fastened. With an insufficiently closed quick-release the wheel can come loose, thus creating a serious risk of accident!

If your MERIDA road bike has thru axles (h), read the instructions of the thru-axle and wheel manufacturers on this MERIDA CD-ROM.

If your MERIDA road 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" on the lever **(a)**. 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" on the outside of the lever **(b)**. 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 **(c)** 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, i.e. it should not stand 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.

a

b

c

d

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 bike so that the wheel is suspended a few centimeters from the ground and hit the tire from above **(d)**. 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.

How to fasten components securely with a thru axle

Formula XQR 15 (road bikes and cyclo-cross bikes)

The Formula thru axle **(e)** for road and cyclo-cross road bikes is a typical Formula thru axle with an internal dimension of 100 mm and a thread in the fork.

Mounting wheels
If your bike is equipped with a Formula 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 Formula quick-release levers from the right side through the drop-out and the hub.

Make sure the quick-release lever is completely open 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 Formula thru axle quick-release lever like a usual quick-release lever. The quick-release lever should not stand out to the front and should fit snugly against the lower leg.

Improperly mounted wheels may throw you off your bike and result in serious accidents!

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

Adjusting the MERIDA bike to the rider

Your body height and proportions are decisive for the frame size of your MERIDA road bike. Make particularly sure there is enough space between your crotch and the top tube so that you do not hurt yourself, if you have to get off your bike quickly **(a)**.

By choosing a specific type of bike you roughly determine the posture you will be riding in **(b+c)**. However, some components of your MERIDA road 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/shifters.

As all works require know-how, experience, suitable tools and skills, you should restrict yourself to adjusting your seating position. 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 road 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 road bike in an area free of traffic.

a

b

c

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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. 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.

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

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

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.

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 (see the chapter "How to use quick-releases and thru axles") or the binder bolt of the seat post clamp **(e)** at the top of the seat tube. 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 **(f)** (max., min., stop or the like) should always remain within the seat tube. Always grease the surface 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.

e

f

g

h

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 **(g)**. 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 **(h)**. 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! 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.

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!

a

b

c

d

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!

Adjusting the height of the handlebars

In principle, MERIDA road bikes are sports bikes designed for speed. For this reason alone riding a MERIDA road bike requires certain basic preconditions of the trunk, shoulder and neck muscles. 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. As a general rule you should be able to grip all three basic positions of the handlebars **(b-d)** without any discomfort on a road bike.

In the case of road bikes an Aheadset®-stem allows the vertical adjustment of the handlebars. This adjustment requires 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.

Stems come in varying lengths **(e)** as well as shaft and binder tube diameters. 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.

The stem 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!

The bolted connections of stem and handlebars have to be tightened to the prescribed torque values **(f)**. If you disregard the prescribed values, the handlebars or stem may come loose or break. 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.

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

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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.

Stems for threadless systems, the Aheadset®-systems

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 **(g)**. In the case of flip-flop stem models 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 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 **(h)**. 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 of MERIDA road racing machines and cyclo-cross bikes" 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 the proper fit again.

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

b

c

d

These routines require a certain amount of manual skill and (special) tools and are best left to your MERIDA dealer. If you still wish to do this by yourself, carefully read through the instructions of the stem manufacturer on this MERIDA CD-ROM beforehand.

In the case of turned stems, it is possible that the cables are too short. In this case riding can be unsafe. Ask your MERIDA dealer for advice.

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.

Stems come in varying lengths as well as shaft and binder tube diameters (c). 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.

Keep in mind that readjusting the position of the stem changes the position of the handlebars and of the brake levers/shifters. Readjust these components (d), as described in the chapter "Adjusting the tilt of the handlebars and brake levers of MERIDA road racing machines and cyclo-cross bikes".

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

The inclination of your upper body **(e)**, 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 values (f). 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 (g). Otherwise the saddle rail can fail! Check the bolts by using a torque wrench once a month according to the prescribed values.

e

f

g

h

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 lengths of the cables – a job best left to your MERIDA dealer!

The manufacturers of saddles normally provide detailed 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 (h)** 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 **(a)** 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. 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.

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.

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

Clamping with **two bolts** in line **(b)**: 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.

a

b

c

d

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 **(c)** 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.

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 **(d)**.

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.

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

If you have a **single bolt system (e)**, the seat post for most of the sports saddles is designed for a saddle rail diameter of 7 mm. Replacement outer clamps for ovalized saddle rails of 8 mm x 8.5 mm (W x H) as well as for carbon saddle rails bigger than 8 x 8.5 mm are also available. If you are not sure which saddle rail type you have or if you need further information, contact your MERIDA dealer.

To mount the saddle unscrew the transversal fixing bolt **(f)** 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.

e

f

g

h

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 **(g)**. 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 **(h)** until you have reached the maximum torque value indicated in Newton meters (Nm) on the seat post.

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.

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.

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

Adjusting the brake lever reach on MERIDA road bikes

With road bikes the clearance between shift/brake levers and handlebar can be adjusted to a minor degree. This gives riders with small hands the convenience of bringing the brake levers closer to the handlebars.

The first phalanx respectively of the index and the middle finger must reach around the brake lever **(a)**. Braking from the top with your hands on the upper end of the brake grips is not an alternative in the long run and in hazardous situations, you need more manual force and cannot support yourself appropriately.

In the case of **Shimano's** Dura-Ace unscrew the chrome cover and tighten the screw positioned in the front **(b)**. In the case of the Ultegra you need special insert pieces **(c)**. In the case of both Di2 models you reach the screws from the rear, after you have removed the hoods.

In the case of **SRAM** start by setting the cam disc on the slightly pulled and inward moved shifters. Screw in the screw positioned behind the hood in the body by using an Allen key.

In the case of **flat bars** there is a small adjusting bolt where the brake hose of a side-pull brake runs into the brake lever unit or on the lever itself.

a

b

c

d

Check the proper adjustment and functioning of the brake system subsequently, as described in the chapter "The brake system" and/or in the brake manufacturer's instructions on this MERIDA CD-ROM.

If you have problems reaching the levers, please contact your MERIDA dealer.

Make sure you cannot pull the brake levers all the way to the handlebars (d). Your maximum braking force must be reached short of this point!

Note that the bolted connections of the stem, handlebars and brakes have to be tightened to the specified torques. You will find the prescribed values in the chapter "General notes on care and servicing" or in the instructions of the component manufacturers on this MERIDA CD-ROM. If you disregard the prescribed values, the components may come loose or break. This can lead to a severe crash.

What to bear in mind with MERIDA time trial handlebars of MERIDA triathlon and time trial machines

In triathlon sport and time trial, where a particularly aerodynamic seating position is important, so-called aero bars **(e)** are commonly used. With these aero models the shifters are often positioned at the handlebar ends **(f)**, the brake levers at the ends of bull-horn handlebars. When you ride with your back in a horizontal position, the brake levers are out of reach and the reaction time is longer, which makes your stopping distance longer. For this reason it is very important to anticipate problems when riding.

Within certain limits the position of the handlebars can be adjusted according to your personal preferences. That means that the straight part of the aero bars should point only slightly downwards or upwards. The basic handlebars should be parallel to the ground or point slightly upwards. Make sure your forearms are always comfortably rested, i.e. your elbows should project beyond the armrests a little towards the rear **(g)**.

Note that the distance you need to stop your bike increases, while riding with the hands on the top handlebars or in aerodynamic position. The brake levers are not always within easy reach.

Triathlon bikes and time trial machines have specific riding characteristics. Make yourself familiar with your new MERIDA triathlon bike or with your new MERIDA time trial machine in an unfrequented area and approach the riding characteristics step by step.

e

f

g

h

Adjusting the tilt of the handlebars and brake levers of MERIDA road racing machines and cyclo-cross bikes

The straight extensions below the drops should be parallel to the ground or point slightly downwards towards the rear **(h)**. The ends of the brake lever/shifter units should meet an imaginary extension of the bottom line of the drops, the upper part of the lever will then be in horizontal position or point slightly upwards. Shifting the brake levers/shifters is a job best left to your MERIDA dealer, as it involves retaping the handlebars afterwards.

To adjust the tilt of the handlebars, release the Allen bolt(s) on the underside or front side of the stem. Turn the handlebars to the desired position. Make sure the handlebars are accurately centered in the stem.

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. 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.

Once clamped in the stem try rotating the handlebars and tighten the bolt a little more, if necessary. Use a torque wrench and never exceed the maximum torque values given in the chapter "Recommended torque settings", directly on the components and/or in the instructions of the component manufacturers on this MERIDA CD-ROM.

The brake system

Brakes **(a+b)** are used to adjust your speed to the surrounding terrain and traffic. In an emergency situation, the brakes must bring your MERIDA road 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 road 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. Wet weather reduces the braking power. Actuate the brakes carefully when riding on wet or slippery ground, as the tires can easily skid. Therefore, reduce your speed when riding in such conditions. Rim brakes are liable to overheating as a result of braking too long or brake dragging. This can damage the inner tube or make the tire slip on the rim, causing a sudden loss of air. 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.

a

b

c

d

The assignment of brake lever to brake caliper can vary, e.g. left lever acts on front brake **(c)**. 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 the braking surfaces and brake pads are absolutely free of wax, grease and oil **(d)**. 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. Your MERIDA dealer will be pleased to help you.

Be sure to observe 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

Racing/Side-pull brakes

Functioning and wear

Actuating the levers on the handlebars **(e)** and cables **(f)** causes a brake pad **(g)** to be pressed against a brake surface. Thehe ensuing friction slows down the wheel. If water, dirt or oil come into contact with one of the braking surfaces, this changes the coefficient of friction and deceleration is reduced. This is why brakes respond with a slight delay and less powerfully in wet weather.

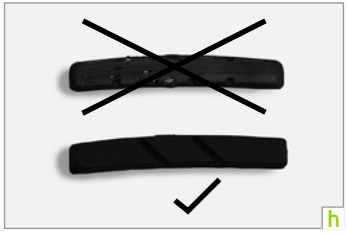
In order to maintain their effectiveness, brakes need to be checked and readjusted at regular intervals.

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, both of which can cause an accident! Risk of an accident!

e

f

g


h

Functional check

Test the brakes in stationary by firmly pulling the brake levers towards the handlebars. 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.

Check whether the brake blocks are perfectly aligned with the rims and are still sufficiently thick. You can judge the wear of the brake pads by the appearance of the 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 corresponding instructions of the respective manufacturer.

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”.

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

Both brake arms must hit the rim simultaneously, when you actuate the brake lever. They must keep off the tire.

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 (a) 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.

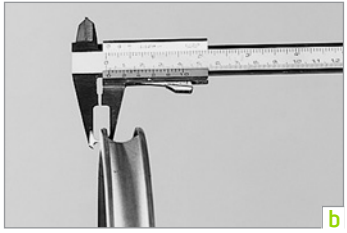
Have your rims inspected and measured regularly by your MERIDA dealer (b).

Synchronizing and readjusting

With dual pivot brakes, turn the small (headless) screw located at the side or on top of the caliper **(c)**, until the left and right brake pad are at the same distance from the rim.

Also check whether the bolt by which the brake is screwed to the frame is still tightened to the proper torque, i.e. according to the torque value given in chapter "Recommended torque settings".

a


b

c

d

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 on MERIDA road bikes".

With ongoing brake pad wear, the pressure point at the brake lever moves towards the handlebars. Check the free travel at regular intervals; it should not be longer than a quarter of the whole travel. For readjustment turn the knurled nut or bolt **(d)** through which the cable runs into the brake body until the lever has the desired travel. Test the brakes subsequently in a place free of traffic.

Always test the brakes' function when stationary after adjusting them, making sure the brake pads engage fully with the rim without touching the tire when you pull them hard. Make sure you cannot pull the lever all the way to the handlebars.

Cross/Cantilever brakes

Some MERIDA cyclo-cross bikes have cantilever brakes **(e)** which provide wider clearance for muddy tires and are sometimes fitted with additional brake levers also allowing braking from the upper part of the handlebars **(f)**.

Functioning and wear

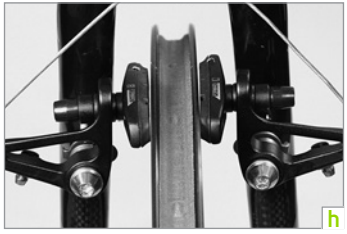
Cantilever brake designs have two brake arms mounted separately on either side of the rim. When actuating the brake lever, both arms are pressed together by the cable, the pads touching the rim and the ensuing friction slows down the wheel. If water, dirt or oil come into contact with one of the braking surfaces, this changes the coefficient of friction and deceleration is reduced. This is why brakes respond with a slight delay and less powerfully in wet weather. In order to maintain their effectiveness, brakes need to be checked and readjusted at regular intervals.

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 **(g)**. 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, both of which can cause an accident! Risk of an accident!

e

f

g


h

Functional check

Test the brakes in stationary by firmly pulling the brake levers towards the handlebars. 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.

Check whether the brake pads are accurately aligned with the rims. Are the brake pads still sufficiently thick? You can judge the wear of the brake pads by the appearance of the grooves. If the pads are worn down to the bottom of the grooves, it is time to replace them. Be sure to observe the corresponding instructions of the respective manufacturer.

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”.

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 **(h)**. This setting is to prevent the brake pads from screeching when applied. 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.

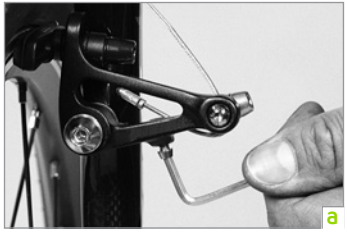
Have your rims inspected and measured regularly by your MERIDA dealer.

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.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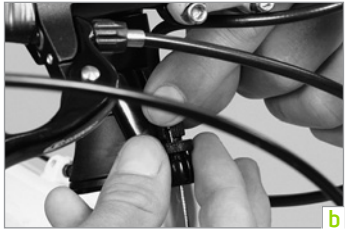
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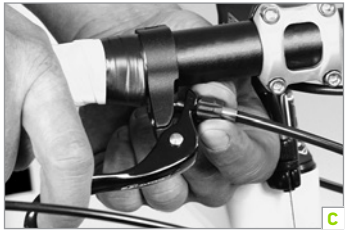
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d

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 on MERIDA road bikes".

With ongoing brake pad wear, the pressure point at the brake lever moves towards the handlebars. Check the free travel at regular intervals; it should not be longer than a quarter to a third of the whole travel. If necessary, readjust at the additional brake levers on the handlebars **(b)**. Turn the adjusting bolt counterclockwise.

If no additional brake levers are installed, readjust at the cable stop at the fork or the frame. Release the lock nut and undo the slotted adjusting screw counterclockwise **(c)**. If the free travel complies with your wishes, hold the adjusting screw tight and turn the lock nut against the cable stop until you feel resistance.

Always test the brakes' function when stationary after adjusting them, making sure the brake pads hit the rim evenly with the entire surface (d) without touching the tire when you pull them hard. Make sure you cannot pull the lever all the way to the handlebars.

Adjusting the brake lever reach

With disc brakes the brake levers can be adjusted to the size of your hands, too, allowing you to operate them with optimal effectiveness **(e+f)**.

For more information see the chapter "Adjusting the brake lever reach on MERIDA road bikes" and in the original operating instructions of the brake manufacturer on this MERIDA CD-ROM.

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

Mechanical and hydraulic disc brakes

Functioning and wear

Actuating the hand lever on the handlebar causes stationary brake pads to be pressed against a rotating braking surface. The ensuing friction slows down the wheel. The rate of deceleration is not only determined by the force with which the brake pad is pressed against the braking surface, but also to a decisive degree by the coefficient of friction, which depends on the two materials that are rubbed against each other.

In the wet, disc brakes **(g+h)** respond much faster than rim brakes. They also require fairly little maintenance and do not wear down the rims as rim brakes do. One drawback of disc brakes is that they tend to be noisy when they are wet.

e

f

g

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When water, dirt or oil gets in contact with one of the engaging surfaces, this changes the coefficient of friction. This is why disc brakes respond at a slight delay and less powerfully in wet weather. The friction generated by braking causes wear to the brake pads as well as to the rotors! Frequent rides in the rain hasten wear on both engaging surfaces.

Leakages in the lines of hydraulic brakes may render them ineffective. Remove such leakages immediately, otherwise risk of accident!

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

Disc brakes are susceptible to overheating during braking. Therefore, do not touch the disc or brake caliper after extensive usage of your brake, e.g. after riding downhill.

Ensure that rotors and brake pads are absolutely free of wax, grease and oil. Brake pads, once contaminated with oil cannot be cleaned, but have to be replaced!

Wet conditions and/or a heavily clogged brake can lead to squeaking noises during braking.

When replacing brake pads, be sure to only use marked original spare parts matching your brake.

Adjusting the brake lever reach

With disc brakes the brake levers can be adjusted to the size of your hands, too, allowing you to operate them with optimal effectiveness **(a-c)**.

For more information see the chapter "Adjusting the brake lever reach on MERIDA road bikes" and in the original operating instructions of the brake manufacturer on this MERIDA CD-ROM.

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

Checking and readjusting in the case of mechanical disc brakes

Regularly check the braking response and the condition of the brake cables while pulling on the brake lever.

Do you get a clear-cut braking response when you pull the brake lever hard, and does the lever remain clear of the handlebars no matter how hard you pull?

To a certain extent, an increasing lever travel due to wear of the brake pads can be compensated at the additional brake lever's adjusting element on the brake cable or directly at the brake caliper.

a

b

c

d

Unscrew the union nut on the bolt through which the cable enters the brake caliper **(d)** and then unscrew the bolt until the lever has the desired travel. Retighten the lock nut by taking care that the slit of the screw head does not face forward, as this would unnecessarily permit water or dirt to enter. There are some models which require an additional adjustment directly inside the brake caliper.

Check at regular intervals, whether the brake pads are still sufficiently thick. The wear of the pads can be checked at the inspection window on the upper side of the brake caliper. If there is approximately 1 mm of material left on each brake pad, remove the pads according to the manufacturer's operating instructions, check them thoroughly and replace them, if necessary.

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. Ask your MERIDA dealer for advice.

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

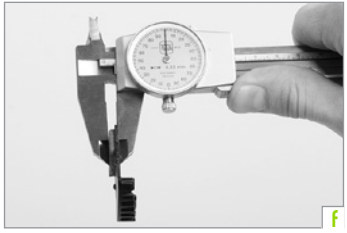
Brake cables which are damaged, e.g. frayed, must be replaced immediately, as they can otherwise fail in a critical moment, possibly causing a crash.

Some systems must be readjusted directly at the brake caliper to compensate wear. Be sure to read the operating instructions of the brake manufacturer on this MERIDA CD-ROM.

New brake pads have to be broken in before they reach their optimal braking power. Accelerate your MERIDA cyclo-cross or road bike 30 to 50 times to around 30 km/h and bring it to a halt each time.

In any case, be sure to read the original instructions of the brake manufacturer on this MERIDA CD-ROM before adjusting or servicing the brakes.

e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Checking and readjusting in the case of hydraulic disc brakes

Regularly check the lines and connections for leaks while pulling on the lever. If hydraulic oil or brake fluid leaks out, you should take appropriate measures immediately, as a leak can render your brakes ineffective. Ask your MERIDA dealer for advice. A leak in the brake lines can render the brake ineffective. Risk of an accident!

Most of the brake models are equipped with a mechanism which automatically compensates for the wear. Before every ride, check whether you get a clear-cut braking response before the lever touches the handlebars **(e)**.

Check at regular intervals, whether the brake pads are still sufficiently thick **(f)**. The wear of the pads can be checked at the inspection window on the upper side of the brake caliper. If there is approximately 1 mm of material left on each brake pad, remove the pads according to the manufacturer's operating instructions, check them thoroughly and replace them, if necessary.

The brake models of some manufacturers include transport locks **(g)** with cut-outs. The brake pads of these brakes must be replaced as soon as they fit into these cut-outs. Only use original replacement pads **(h)** and follow the operating instructions of the brake manufacturer on this MERIDA CD-ROM. If you have the slightest doubt, leave this job to your MERIDA dealer.

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

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

Do not transport your MERIDA road bike with saddle and handlebars upside down – risk of brake failure.

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

New brake pads have to be broken in **(a+b)** before they reach their optimal braking power. Accelerate your MERIDA road bike 30 to 50 times to around 30 km/h and bring it to a halt each time **(c)**.

In any case, be sure to read the original instructions of the brake manufacturer on this MERIDA CD-ROM before adjusting or servicing the brakes.

a

b

c

d

Do not actuate the brake levers with the wheels dismounted. This would push the brake pads together, making it difficult to remount the wheel. Mount the enclosed transport locks **(d)** after dismounting the wheels.

More information on adjusting and maintenance is available on the internet at
www.shimano.com
www.sram.com
www.tektro.com
www.trpbrakes.com

The gears

Derailleur gears

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

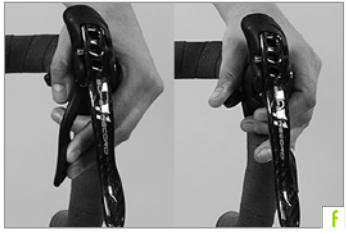
A low gear (where in the case of derailleur gears the chain runs on the small chainwheel and a large sprocket) **(h)** allows you to climb steep hills with moderate pedaling force. You must, however, pedal at a faster pace or higher frequency. High gears (large chainwheel, small sprocket) are for riding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

In general, your pedaling speed, also referred to as cadence, should be higher than 60 strokes a minute. Racing cyclists pedal at a rate between 90 and 110 strokes a minute on level ground. When climbing, your cadence will naturally fall off somewhat. Your pedaling should always remain fluent, however.

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

Practice switching gears in a place free of traffic until you are familiar with the functioning of the brake lever/shifter units or the shifters of your bike.

e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Read the gear manufacturer's operating instructions on this MERIDA CD-ROM 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 chainwheel (front) –
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:

Right shifter – sprockets (rear)
Left shifter – chainwheels (front)

Modern MERIDA 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.

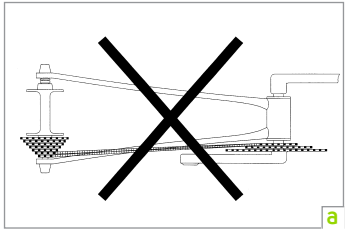
An unfavourable run of the chain is when the smallest chainwheel is used with one of the two or three outermost (smallest) sprockets **(a)** or when the largest chainwheel is used with one of the inmost (largest) sprockets **(b)**.

The bottom bracket 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. If you notice any play, contact your MERIDA dealer immediately.

Depending on the gear system, gear shifting is initiated by actuating a brake lever/shifter unit **(c)** or by a shifter in the case of flatbars. Continue pedaling during gear shifting, however, with reduced pedaling force.

Please find below the most common brake levers/shifter units and their operation. It is, however, also possible that your new MERIDA road bike has a gear system that is not listed below.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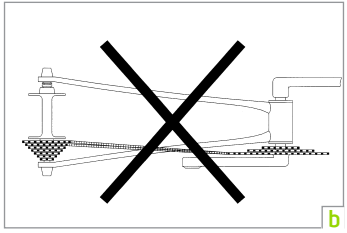
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In the case of **Campagnolo Ergopower** you shift with the shifter located behind the brake lever to the larger chainwheels or sprockets by moving it inwards with the index or middle finger. By pressing with the thumb on the shifter inside the unit the chain moves on the smaller chainwheels or sprockets. By pressing the shifter once you can shift up to two chainwheels or three sprockets at a time.

The **EPS (d)** is the electronic version of the high-quality drive systems from **Campagnolo**. Instead of by cables the signal is transmitted by wires. The rear and the front derailleurs are moved by small electrical motors. The power supply is provided by a rechargeable battery mounted to the frame.

The shifters are positioned and actuated like the mechanical gears:
With the Ergopower you must only press control buttons, instead of moving the lever behind the brake lever inwards as is the case with the conventional Ergopower shifters from Campagnolo. Shift to the larger sprockets by pressing the longish control button behind the brake lever. By pressing the inner control button with the thumb **(e)**, the chain moves to the smaller sprockets.

The longer you keep the button pressed, the more the rear derailleur moves. With a single movement you can shift up and down up to 11 sprockets.

In the case of **Shimano Dual Control (f)** brake lever/shifter units you shift to the larger chainwheels or sprockets by moving the entire brake lever inwards. You can shift up to two chainwheels or three sprockets per gear shift. By moving inward only the small lever located behind the brake lever, the chain moves on the smaller chainwheels or sprockets. You can shift only one chainwheel/sprocket per stroke.

The **Di2** is the electronic version of the high-quality drive systems from **Shimano**. Instead of cables the signal is transmitted by wires. The rear and the front derailleurs are moved by small electrical motors. The power supply is provided by a rechargeable battery that is mounted to the frame or in the seat post **(g)**.

The shifters are positioned and actuated like the mechanical gears:
With a Di2 you must only press control buttons, instead of pressing the entire brake lever or the lever positioned behind inward as is the case with usual dual control shifters from Shimano. Shift to the larger sprockets by pressing the long control button on the side of the brake lever. When you press the triangular control button that is behind the brake lever the chain moves onto the smaller cogwheels.

SRAM Force brake levers/shifters **(h)** have only one shifter that is located behind the brake lever. With one complete sweep of the shifter, the rear derailleur shifts in a higher gear by one to two chainwheels or three sprockets. With a short sweep the chain changes to the next smaller chainwheel or sprocket.

e

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With **Shimano**, **SRAM** and **Campagnolo bar end shifters** for triathlon and time trial use the shifting lever is pressed downward to move the chain to the smaller sprockets to achieve a higher gear and to the smaller chainwheels to achieve a lower gear. By pulling the shifter upwards you can shift to the larger chainwheels or sprockets.

In the case of flatbar shifters the shifters are located underneath the handlebars. The right-hand, big shifter is actuated with the thumb. The chain moves on larger sprockets, i.e. to lower gears. The smaller shifter is actuated either with the index finger or with the thumb and shifts into the other direction. By actuating the big shifter with the thumb on the left side you shift to the larger chainwheel, i.e. to a higher gear ratio.

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 shaft and cranks, they can slip off and sustain damage. Risk of an accident!

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

Practice switching gears in a place free of traffic until you are familiar with the functioning of the brake lever/shifter units or the shifters of your MERIDA road bike.

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

Checking and readjusting

The derailleur gears of your MERIDA road 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 **(a)** accurately is a job 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.

a

b

c

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Adjusting the rear derailleur

Increase the tension of the Bowden cable by turning the adjustable down tube cable stop **(b)** or the adjusting bolt through which it runs into the rear derailleur **(c)**. 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 lift the rear wheel and turn the cranks by hand or ride the MERIDA road bike and shift through the gears.

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 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 your MERIDA road bike fell over to the chain side or if you mount another wheel, it is imperative that you check the limit stops.

Shift with the right shift lever to the highest gear. The inner cable is relaxed and the chain running on the smallest sprocket. Look from the rear of the bike at the cassette and check whether the teeth of the smallest sprocket and the teeth of the top guide pulley are all in a perfectly vertical line. If necessary, correct the position by means of the limit screws **(e)**. 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.

If the screws are not marked, you will have to find out by trial and error. Turn one of the bolts, counting the number of turns, and watch the gear changer. If it does not move, you are turning the wrong one. Turn back the counted rotations to find its original position.

Turn the screw clockwise to shift the rear derailleur towards the wheel and counterclockwise to shift it away from the wheel.

e

f

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h

Shift carefully to the largest (inmost) sprocket **(f)** 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 **(g)**. Carefully turn the cranks while checking.

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.

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

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

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

Adjusting the front derailleur

The range within which the front derailleur **(a)** keeps the chain on the chainwheel without touching the chain itself is very small. If the chain tends to jump off the chainwheel, you will need to reduce the movement range in the same way as with the rear derailleur, i.e. by turning the limit screws marked "H" and "L" **(b)**.

Start by shifting to the large chainwheel (front) and the smallest sprocket (rear) **(c)**. Turn in the outer limit screw ("H") exactly to the point where the chain does not touch the front derailleur, even under heavy load. And only at the point where the chain does not move from the middle to the large chainwheel any more, the limit screw can be released a little.

Continue by shifting to the smallest chainwheel (front) and the biggest sprocket (rear). Turn in the inner limit screw ("L") exactly to the point where the chain does not touch the front derailleur. And only at the point where the chain does not move from the middle to the small chainwheel any more, the limit screw can be released a little.

This adjustment prevents the chain from falling off which would suddenly interrupt the drive involving the risk of an accident. In cases of doubt this adjustment is a job best left to your MERIDA dealer.

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As with the rear derailleur, the cable of the front derailleur 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 down tube cable stop.

Always check after an accident whether the guide plates of the front derailleur are still parallel to the chainwheels (d). 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. Risk of an accident!

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

Shimano Di2

Adjustment and maintenance

If you wish, your MERIDA dealer can also change the functioning of the Di2 control buttons **(e+f)**. The change has to be done with a special test device from Shimano which is also used for troubleshooting.

If you have smaller hands and want to position the levers closer to the handlebars, there are special adjusting screws on the handlebars. The handling of these screws is described in the chapter "Adjusting the brake lever reach on MERIDA road bikes".

To adjust the rear derailleur shift into one of the middle gears press the button at the front switch under the handlebars until the control lamp illuminates red **(g)**. The fine adjustment of the rear derailleur can now be carried out. Turn the crank and listen to the noise of the chain while running.

If there is a noise when the chain rolls off, press the front lever. With every push the rear derailleur moves inward by one decimillimeter. If the noise gets louder, press the rear lever.

The rear derailleur moves outwards in steps of one decimillimeter. Once the chain runs quietly, press the button at the switch once again, the red light goes out. Finish by shifting through all the gears to check the proper functioning.

e

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h

Carefully shift through the gears until the chain runs on the biggest sprocket. If the shifting is not smooth, readjust once again.

Continue turning the crank carefully and make sure the rear derailleur cage does not collide with the spokes and the chain does not move beyond the biggest sprocket. While doing so, press your thumb against the rear derailleur.

In principle, the limit stops are adjusted like the limit stops of the mechanical gears **(h)**. Be careful when shifting to the lowest and biggest gears in order to check the position of the limit stops.

Make a test ride in a place free of traffic before you use your new Di2 gears.

Read the operating instructions of the gear manufacturer on this MERIDA CD-ROM.

Rechargeable battery

A new, fully charged battery allows you to ride approx. 1,000 to 2,000 km. If the battery is charged to around 25 %, then this will be enough for around 250 kilometers.

Rechargeable batteries have no memory effect. The battery can therefore be recharged **(a)** without having run completely empty.

If the battery is dying, the front derailleur is the first to stop working. In this state you can still ride a few kilometers and change gears with the rear derailleur. The battery should, however, be recharged as soon as possible. When the rechargeable battery is empty, the rear derailleur remains in the last chosen gear. Shifting into another gear is no longer possible **(b)**!

You can check the battery's state of charge at any time. To do so, press one of the control buttons **(c)** and keep it in this position for half a second at least. The LED on the control unit indicates the state of charge:

- green light is on for about 2 seconds: state of charge of the battery 100 %
- green light blinks 5 times: state of the charge of the battery approx. 50 %
- red light is on for about 2 seconds: state of charge of the battery approx. 25 %
- red light blinks 5 times: state of charge of the battery empty

a

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The capacity of the battery and hence the distance that you can ride drop gradually over time. This is unavoidable. You must replace the battery if the distance that you can ride is no longer sufficient for your requirements.

Only use the supplied charger to charge the battery (d)!

If the rechargeable battery is not used for a longer period of time, it should neither be empty nor full. Keep the nearly charged battery (50 % to 60 %) in a dry, cool place and out of the reach of children. After three months at the latest you should check the state of charge. Protect the contact areas of your rechargeable battery with the protective covers before storing the battery.

Charging of a (fully discharged) battery takes around one and a half hours.

Campagnolo EPS

Adjustment and maintenance

If you have bigger hands and want to position the levers further away from the handlebars, Campagnolo offers insert pieces which can be inserted under the Ergopower lever unit towards the handlebars.

The gears must be readjusted after you have mounted a new rear wheel or when shifting has become imprecise. Shift to the biggest chainwheel (front) and into the tenth speed, i.e. on the second smallest sprocket (rear).

Press on both Ergopower shifter units simultaneously the mode-buttons for a little bit more than 5 seconds **(e)**. The interface control lamp at the stem changes its color to blue. The setting mode is activated.

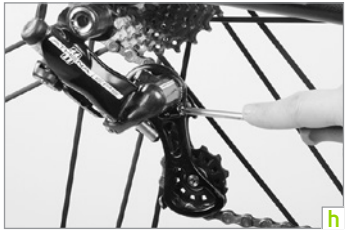
Press the shift lever towards the bigger sprockets. The rear derailleur moves inward in some 1/100 mm steps. Check whether the chain makes any noise by turning the crank by the pedal forward and backward.

The chain moves in the opposite direction, i.e. towards the smaller sprockets, by pressing the lever pointing to the center of the handlebars **(f)**. As is the case with the other lever, the rear derailleur moves the more the longer you leave your thumb on the lever. Be sure to check the run of the chain again and again until it produces hardly any noise any longer.

e

f

g


h

Press the mode-button of one Ergopower lever twice to return to the cycle mode. This will be confirmed by the interface control lamp where the blue light starts to blink. Carefully shift through the gears until the chain runs on the biggest sprocket. If the shifting is not smooth, readjust once again.

Continue turning the crank carefully and make sure the rear derailleur cage does not collide with the spokes and the chain does not move beyond the biggest sprocket. While doing so, press your thumb against the rear derailleur.

If necessary, readjust at the setscrew with a 2-mm Allen key **(g)**. By turning the setscrew clockwise you limit the swiveling range. By turning it counterclockwise the rear derailleur obtains a little more space towards the wheel.

Check the space between the chain guide roll and the big sprocket. The distance should be 5 to 7 mm. Turn the screw on the joint for adjustment **(h)**. Turning the screw clockwise reduces the space.

To adjust the front derailleur shift to the small chainwheel (front) and to the biggest sprocket (rear). Activate and adjust, as described above. Proceed, however, with the adjustment on the left Ergopower lever. Turn the crank forward and backward to check whether the chain runs along the front derailleur (distance 0.5 mm) without touching it.

Make a test ride in a place free of traffic before you use your new EPS gears.

Read the operating instructions of the gear manufacturer on this MERIDA CD-ROM.

Rechargeable battery

The rechargeable battery (PowerUnit) can be mounted in the seat, top and down tube as well as on the left chainstay.

A new, fully charged battery allows you to ride approx. 1,500 to 2,500 km.

Rechargeable batteries have no memory effect. The battery can therefore be recharged without having run completely empty.

Pressing the mode-button of your Ergopower lever activates the battery indicator on the interface **(a)**. You can check the battery's state of charge at any time. The control lamp shows the remaining capacity **(b)**:

- continuously green: remaining capacity 100 to 60 %
- blinking green: remaining capacity 60 to 40 %
- yellow: remaining capacity 40 to 20 %
- continuously red: remaining capacity 20 to 6 %
- blinking red: remaining capacity 6 to 0 %

a

b

c

d

Only use the supplied charger to charge the battery!

Insert the magnetic pin into the rechargeable battery (c) when doing any screwing on your MERIDA road bike with Campa EPS or when parking your MERIDA road bike for a longer period of time to switch off the entire electrics.

When storing the rechargeable battery for winter, make sure the state of charge is about 60 %. This will ensure a long service life. The state of charge should not fall below 6 %, otherwise there is the risk of a harmful deep discharge. Therefore, check the state of charge after three months at the latest.

Chain – care and wear

Regular and correct lubrication of your bike's chain **(d)** 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 **(e)**. 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 **(f)**. 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 road 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.

e

f

g

h

Chain maintenance

Although the chain is one of the wearing components of your MERIDA road 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 for checking the chain wear **(g)**. 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 (h). 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 to protect the sensitive tube against the edges of the rim trough, which are often sharp **(a)**.

Another system comprises the **tubular tires** which are glued on specific rims. A third system comprises **tubeless tires** which also require specific rims.

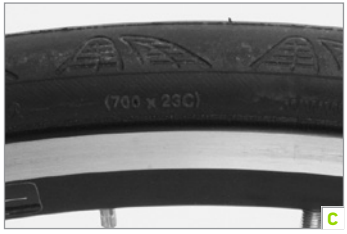
The wheels are subjected to considerable stress through the weight of the rider and any carried baggage as well as through bumpy road surfaces and terrain. Although wheels are manufactured with great care and delivered accurately trued, spokes and nipples can lose a little tension on the first kilometers. 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 **(b)**.

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

a

b



c

d

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 will be pleased to help you choose from the numerous types of tires.

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 23-622 means that the tire is 23 mm wide when fully inflated and has an inner tire diameter of 622 millimeters. The other size is indicated in inches (e.g. 23x7/8 or 700x23c) **(c)**.

Tires must be inflated to the proper inflation pressure **(d)** 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 side of the tire or on the type label **(e)**. 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 **(f)** 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 **(g)** 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.

In the case of **tubular tires** which must be glued to the rim the tire provides an airtight design without inner tube. In case of a puncture there is no inner tube to be removed or repaired. This particular design requires special rims without rim flanges.

If necessary, read the respective operating instructions on this MERIDA CD-ROM before working on such kind of tires.

Tubeless tires can only be used in combination with specifically designed wheels. Pay attention to the manufacturer's type designations (e.g. "2way-fit").

e

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

f

g

h

With reduced pressure tubeless tires can be used as clincher tires. The appropriate pressure for 75-kg-cyclists is usually 7 bar and for 65-kg-cyclists 6 bar. Make sure the pressure is not below 4.5 bar. Observe the marking on the tire sides regarding the maximum pressure.

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!

If you mount wheels with carbon rims (h) on your MERIDA road bike, you must most probably change the brake pads, as conventional brake pads often do not provide the desired braking effect. It is essential to also observe the instructions of the wheel manufacturer on this MERIDA CD-ROM.

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.

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

Valves

There is only one valve type in general use on MERIDA road bikes: The **Sclaverand** or **Presta valve** that is designed to withstand extremely high pressures **(a)**. It has a plastic cap protecting the valve from dirt.

You first have to undo the small knurled nut a little and depress it carefully until air starts to escape **(b)**. Check the nut is tightened and seated in its stem, otherwise air may slowly leak out. It can be hard to inflate tires to the necessary pressure by using hand pumps. It is much easier with a foot-operated or a track pump equipped with a pressure gauge.

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 **(c)**. If the tension of a single spoke changes, e.g. as a result of riding fast over a kerb or due to 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 road bike may even be impaired before you notice the wobbling appearance of a wheel that has gone out of true.

a

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c

d

With rim brakes the sides of the rims also serve as braking surfaces **(d)**. An untrue wheel can impair your braking power. 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.

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.

Carbon wheels

As carbon wheels **(e+f)** are made of carbon fiber reinforced plastic they come with particular aerodynamic properties and low weight.

In case you want to mount carbon wheels, ask your MERIDA dealer for advice.

The maximum overall weight of 120 kg including rider, baggage (rucksack) and MERIDA road bike must not be exceeded. Trailer towing is not permitted in general. Also observe the instructions of the wheel manufacturer on this MERIDA CD-ROM.

Check the condition of the brakes and make sure you only ride with brake pads that are suitable for carbon rims!

Observe possible weight restrictions in the case of carbon wheels. For more information see the instructions of the wheel manufacturer on this MERIDA CD-ROM.

The wheels are exclusively for use in road races and triathlon sports. The wheels are not suitable for riding on unpaved roads, off-road and for jumps etc. In addition, they are not suitable for towing a trailer and for riding with heavy baggage.

Particularities of braking with carbon wheels

As the braking surfaces are made of carbon **(g)**, there are some things to keep in mind. Only use the brake pads of wheel manufacturers **(h)** that are suitable for carbon wheels, as they are designed to suit such type sof rims.

e

f

g

h

Carbon brake pads usually wear down faster than conventional brake pads. Keep in mind that the braking response of the rims needs getting used to, in particular in wet conditions. Therefore, test your brakes in a place free of traffic until you have full control of your bike.

The braking surfaces of the carbon rims are sensitive to heat. Therefore, when you are riding in the mountains, avoid any drag braking. Riding downhill e.g. with a permanently activated rear wheel brake may heat up the material and result in a deformation.

The rim may sustain damage and the inner tube may burst, thus causing an accident. Always use both brakes simultaneously and release them intermittently to allow the material to cool off. If you are in doubt, stop and let them cool down.

Check the condition of the brake pads at short intervals, as they might wear down faster than with aluminum rims.

Please note that wet weather reduces the braking effect considerably. Do not go for a ride, when it is about to rain or in wet conditions. Nevertheless, if you find yourself with your road bike on a wet or moist road, ride particularly carefully and at clearly reduced speed.

Tire puncture

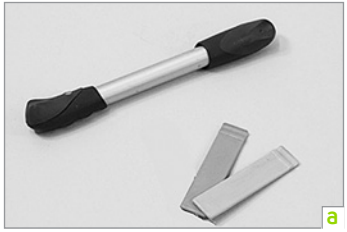
Flat tires are the most common cause of puncture during cycling. However, as long as you have the necessary tools and a spare tube or a repair kit, this need not mean the end of your cycle ride. If your wheels are attached with quick-releases to the frame and the fork, you only need two tire levers and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

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 you have typical road bike rim brakes, open the quick-release lever at the brake **(Shimano, SRAM) (b)** or shift the pin in the brake lever/shifter unit on the handlebars **(Campagnolo) (c)**.

If your bike has **cantilever or V-brakes** you first have to unhook the brake cable from the brake arm. 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.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If you have disc brakes (hydraulic or mechanic), check the position of the brake pads through the inspection window. In this way you will be able to tell later whether the brake pad is still in its proper position. Read the brake manufacturer's operating instructions.

If you have derailleur gears, you should shift the chain to the smallest sprocket before removing the rear wheel. This shifts the rear gear changer 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 road 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.

Do not pull the (disc) brake lever with a removed wheel and make sure to mount the safety locks when removing the wheel for a longer period of time.

If you have a MERIDA cyclo-cross bike with hydraulic disc brakes, never turn it upside down for repair work, i.e. with the handlebars and saddle underneath, as the brakes will fail otherwise!

Observe the operating instructions of the brake and the 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 **(e)**. 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 **(f)** and lever the tire out of the rim in this area. Hold the tire lever fast in its position. Slip the second tire lever between rim and tire at a distance of about ten centimeters on the other side of the valve and lever the next portion of the bead over the edge of the rim **(g)**.

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.

e

f

g

h

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. Be sure to remove it. 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 **(b)**.

a

b

c

d

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 **(c)** with a finger as you work along.

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 **(d)** 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.

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 **(e)**. 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 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)**.

Tubular tires

Dismounting tires

Deflate the tire completely. To dismount the tire, start opposite the valve by pushing the tire to the center of the rim **(h)** until there is a gap and the tire starts to come off. If the tire remains tight, stick a tire lever into the gap and lift the tire off the rim.

Replacing an individual tube is impossible. Instead you have to mount a complete tubular tire. En route the tire cannot be glued and is consequently not tight on the rim even when inflated.

Therefore, be sure to ride back very slowly and carefully by taking the shortest way possible. Back home, you have to glue the tubular tire, as described in the following.

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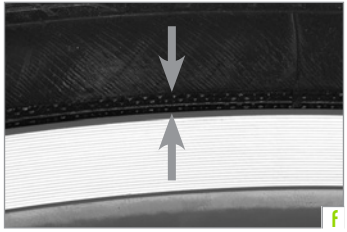
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Mounting tires

Careful mounting that will ensure that the tubular tire holds permanently must be done in steps and can take a long time. Some practice and experience with the tire adhesive used and the relevant model of tubular tire can speed up the work.

In general, mounting tubular tires is a job for your MERIDA dealer. Read the mounting instructions of the tire manufacturer before you start mounting.

Tubular tires can be glued either with liquid tire glue or with adhesive tapes. The positive factor about adhesive tapes is that the mounting is quick. However, the tire will not seat properly in all cases. If you have a puncture while out riding, the tape often remains on the tire that has been removed and the reserve tire no longer seats properly on the rim.

For that reason we recommend a solid bed made up of several layers of liquid rim cement (tire adhesive). This not only holds the tire better, but always remains stuck on the rim when removing the tire.

Nonetheless, here, too, the reserve tire must be pulled off once again after the ride. The existing bed and the tire are then treated with rim cement once again and the tire is mounted again to ensure that it seats properly.

If you have wheels with very high rims, undo the valve insert with the special mounting tool before the first mounting and take it out of the valve, and install a valve extension in its place **(a)**. Screw the valve insert back into the lengthened valve. Now you can inflate and deflate the mounted tire via the extended valve in the usual way.

Inflate the tire to a point where it starts to become round and then stick the valve through the hole in the rim. Starting from the valve and working in both directions press the tire into the rim all the way round. If you are unable to mount it completely on the rim or if this would require excessive force, leave off trying, since it might not work with force alone.

After mounting the tubular tire, spin the wheel and see whether the tire runs true **(b)**. The area where the valve comes out of the tire is often thickened which leads to a vertical runout of the rim and makes the wheel jolt during the ride. Remove the burrs from the valve hole of an aluminum rim or countersink it with a big drill, a triangular scraper or a round file.

If you have carbon rims, be careful when removing the burrs from the hole edge with a round file. Insert the file only from the outside to the inside and not vice versa, otherwise the fibers of the synthetic matrix might fray out. Seal the area with instant glue subsequently. This pretreatment will lead to an improved valve fitting to the rim.

a

b

c

d

If time permits, you can leave the unglued tire inflated on the rim for a few days to make the final mounting easier.

Subsequently, clean the base of the rim from grease or oil by using a rag soaked in spirit or benzine.

Wait for the solvent to evaporate completely before you start to glue the tire onto the rim. Gluing the tire **(c)** is easiest with the wheel clamped in a truing stand or mounted on an old fork clamped in a vice.

With liquid tire glue you will need several layers to create a good adhesive bed. Spread the tire glue evenly and as thinly as possible around almost the entire circumference of the rim.

With a little practice you will be able to apply the glue straight from the tube **(d)**. If this does not work at first you might find it easier to use a stiff brush. If you are using tire glue from a can you will need a brush in any case. Let the tire glue dry until it loses its sticky liquid touch. This can take up to a few hours. In the same way add another two thin films of glue and let them dry. Leave the wheel as it is at least until the next day.

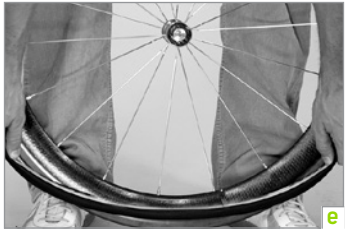
Before mounting the tire also apply a film of glue to the base tape. To complete the adhesive bed add one last film of glue. If necessary, you can leave a section of five to ten centimeters without glue at a place just opposite the valve to make it easier to remove the tire again at a later date.

Let the topmost layer dry for a short time and, while it still feels syrupy, place the wheel on the ground with the valve hole facing upward. Inflate the tire until it starts to round and then stick the valve through the valve hole and press it firmly against the rim. Make sure the sides of the tire do not touch the adhesive bed, since your tire will otherwise look smudgy right away.

If you have left the section opposite the valve hole free of glue, you need not be concerned about glue smearing on the ground or dirt getting into the glue when you place the wheel on the ground.

Take hold of the tire right and left of the valve with both hands, pull it vigorously downward and work it bit by bit into the base of the rim **(e)** until you have about 20 centimeters left to go.

Starting from the top again on either side of the valve pull the tire down with your hands, letting them gradually slip down to the not yet mounted section.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Keeping the tire taut by holding your fingers against the rim and your thumbs on the tire, brace the wheel against your hips. Heave the tire with both thumbs into the base of the rim **(f)**.

When the tire is seated in the base, it has to be centered, as it will rarely run true right away. Clamp the wheel in the mounting stand again and spin it. If the tread does not run exactly in the center or if it swerves to the side at any place, lift it up at that place, twist it a little into true and let it go again.

When the tire runs smoothly in the center, take the wheel off the mounting stand and inflate the tire to approximately half its nominal pressure. Lean your hands on the ends of the axle and quick-release skewers and roll the wheel a few meters on the ground **(g)**. As you roll the wheel, vary between pressing it vertically downward and at a slant to either side **(h)**.

If the tire still runs true during the final check, inflate it to its maximum pressure, deflate until you have reached two thirds of the pressure and wait 8 hours at least or even better a whole day, before setting off for the first time. Beforehand adjust the pressure of the newly mounted tire according to the manufacturer's recommendations and to your own needs.

A poorly glued tubular tire can come off the rim. Risk of an accident!

Benzine and tire glue should only be used in a well aired place, since both materials are highly flammable. Keep them in a safe place out of children's reach.

Tyre glues do not only stick on rims and tires, they also cling quite stubbornly to fingers and clothes. This makes it advisable to wear old clothes when mounting tubulars.

When mounting a tire on a rim that has already been used, it may be necessary to carefully remove glue residues and dirt with emery cloth. Be careful not to damage the carbon material. When you are done, wipe the rim with a soft rag and benzine.

Before dismounting a wheel, be sure to read chapters "The wheels and the tires" and "How to use quick-releases and thru axles".

If your bike has carbon rims, you have to use special tubular tire glue **(a)** (e.g. from Continental). Be sure to read the operating instructions of the manufacturer of tubular tire glue for carbon rims on this MERIDA CD-ROM before applying it.

See the video to enable you to properly glue Continental tubular tires, at www.conti-online.com

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Mounting wheels

To mount a wheel follow the reverse procedure of wheel dismounting. If necessary, insert the brake discs between the brake pads. Make sure the wheel is correctly seated in the drop-outs and accurately centered between the fork legs or the rear and chainstays. Make sure that the quick-release and the drop-out catches are correctly seated. For more information see the chapter "How to use quick-releases and thru axles".

Close the quick-release lever at the brake **(Shimano, SRAM) (b)** or shift the pin in the brake lever/shifter assembly on the handlebars **(Campagnolo) (c)**.

If you have **cantilever brakes (d)** hook up the brake cable at the brake arm. 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).

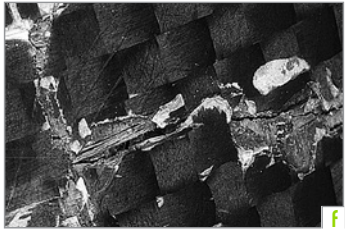
Lift your MERIDA road bike off the ground and spin the wheel with your hand. With the wheel spinning the rotor should not drag along the brake caliper or the brake pads and the rim should keep off the (rim) brake pads.

Immediately put back the Bowden cable of rim brakes after installing the wheel!

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".

e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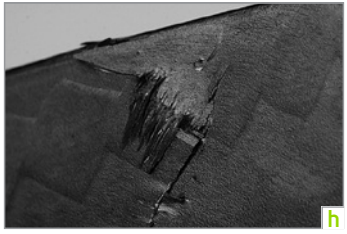
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Special characteristics of carbon

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, i.e. 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.

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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.

Do not combine carbon handlebars with an aero bar, 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 choose 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 (e) or the cracking of the carbon substructure.

e

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The headset

The headset **(f)** connects the fork to the frame, but allows it to move freely. It must afford virtually no resistance to moving, if your MERIDA road 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 **(g)**.

Bring your weight to bear on the saddle, pull the front brakes with your other hand and push your MERIDA road bike firmly back and forth with the wheel remaining on the ground **(h)**. 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.

To check the bearing for ease of running, lift the frame until the front wheel is suspended in the air. 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 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 countersunk 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.

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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. 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.

Things worth knowing about your MERIDA road bike

Cycling helmets and glasses

Cycling helmets are a must when riding a bike. 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 (e+f)! 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 road 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!

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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, for example, 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!

Clothing

Cycling trousers **(g)** 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 **(h)**. 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 will 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 **(a)** 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 road 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 **(b)** 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.

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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 **(c)**. 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 in stationary. Later you can refine your technique in a place clear of traffic (d).

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. 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 pedals and shoe soles are always clear of mud and other impurities (e) 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, in particular when mounted to road bike shoes, are 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 road bike you laid the foundation for many years and miles of enjoyable cycling. Whatever you are planning to do with your MERIDA road 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 road 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.

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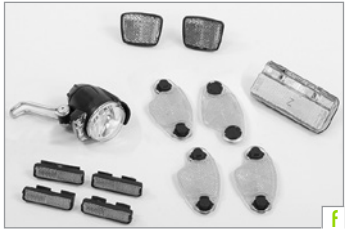
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Any retrofitted part must be compatible with your MERIDA road bike. If you are in doubt or if you have any questions, contact your MERIDA dealer.

Improper accessories may change the qualities of your MERIDA road 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 road bike.

Retrofitted accessories, such as mudguards, pannier racks etc. can impair the functioning of your MERIDA road bike. Ask your MERIDA dealer for advice before mounting any kind of accessories to your bike.

Before buying any additional bells or lighting accessories (f), inform yourself thoroughly whether they are permitted and tested and accordingly approved for use on public roads. Make sure additional battery/accumulator-powered lamps (g) are marked with the wavy line and the letter "K".

Bicycle locks

Do not forget to take a high quality D-lock **(h)** or chain lock with you on your ride. The only way to effectively protect your MERIDA road 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 **(a)**. In this way you will be well prepared in the event of a puncture or some other mishap.

Cycle computers

There are electronic computers that show your current and average speed, your daily and annual mileage as well as the duration of the present ride **(b)**. Real de luxe models also give the highest speed achieved, differences in elevation, your cadence or your heart rate.

Today, there are global positioning systems (GPS) and specific power meters for optimal training on the market which are compatible with your MERIDA road bike.

Aero or triathlon/time trial bars

Before you mount aero or triathlon/time trial bars **(c)** on your MERIDA road bike, it is essential to find out first whether the handlebars or a corresponding attachment for use with your handlebars and stem are approved.

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Read the operating instructions of the handlebar and stem manufacturers on this MERIDA CD-ROM. If you are in doubt or if you have any questions, contact your MERIDA dealer!

Mudguards/wheel protections

If you want to mount mudguards on your MERIDA road bike, ask your MERIDA dealer for advice. There are removable mudguards **(d)**, 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.

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 road bike. Your choice will primarily depend on the weight and volume of the baggage. Using a bicycle rucksack **(e)** is a convenient way of transporting baggage on a bike and therefore recommendable. You can also use pannier racks **(f)** or handlebar bags, but some MERIDA road 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.

If necessary, do not overload your MERIDA road bike (see "Bike card") and also observe the maximum load capacity marked on or impressed in your pannier rack.

Baggage generally changes the riding characteristics of your MERIDA road bike and increases your stopping distance! Practice riding a loaded road bike in a place clear of traffic.

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Taking children with you

MERIDA road or triathlon bikes are mainly not designed for taking children on them. 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 instructions of the child seat or the trailer which must be supplied by the manufacturers with the products.

If you want to hitch a trailer (g) or a kids' tandem bike/trailer system to your MERIDA road bike or if you want to mount a child seat (h) on it, check whether the road bike is designed accordingly. Have a look at the bike card or ask your MERIDA dealer for advice.

Transporting the MERIDA bike

By car

Nearly every car accessory dealer and car company offers carrier systems **(a)** 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!

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Read the operating instructions of your bicycle 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.

Do not buy a carrier on which your MERIDA road 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 road bike is properly fastened before and at regular intervals during the journey. A bike that detaches from the carrier system may endanger other road users.

Always secure your MERIDA road bike or bike components when putting it/them into the interior of your car (b+c). Parts shifting around can impair your safety.

Most clamps are a potential source of damage to large-diameter frame tubes (d) 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.

Make sure to remove all parts of your bike (tools, pannier bags, etc.) which may come loose during transport.

Do not store any traveling bags, suitcases or other objects on your MERIDA road bike inside your car.

If your bike has disc brakes, be sure to mount the safety locks **(e)** before transporting your MERIDA cyclo-cross bike with the wheels dismounted.

Pull the brake levers and secure them with a strong rubber band **(f)**.

Bear in mind that your car may have a greater overall height or width. 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.

e

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By public transport

In cities the regulations for taking MERIDA bikes by public transport differ **(g+h)**. There are e.g. some places where you are only allowed to travel with your MERIDA road 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!

In some trains you can stow your MERIDA road bike in multi-purpose compartments. They are often at the front or end of a train and marked with a bicycle sign.

Before you start your trip inform yourself in time about the conditions of carriage and also observe the regulations and rules about bicycle transport in the countries through which you intend to travel.

By plane

If you want to take your MERIDA road 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 bicycle bags often do not provide sufficient protection for your MERIDA road bike.

Pack the wheels (in particular carbon wheels) in special wheel bags 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 road bike and to get it ready for use at your destination.

If your MERIDA cyclo-cross bike has disc brakes, be sure to mount the safety locks before transporting the bike with the wheels dismounted.

Pull the brake levers and secure them with a strong rubber band.

a

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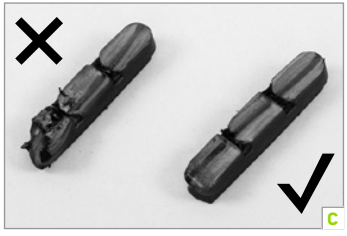
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General notes on care and servicing

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 **(b)**. 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 bike 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.

The intended use of the MERIDA bike includes regular servicing and the replacement of wearing parts in time, e.g. chains, brake pads **(c)** or Bowden and brake cables **(d)**, and therefore has an influence on the warranty and the guarantee, as well.

For more information see the chapter "Service and maintenance schedule".

Servicing 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, and the necessary knowledge.

If a component needs to be replaced, make it a rule to only use original spare parts (e). 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!

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Cleaning and caring for your MERIDA bike

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.

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.

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 **(f)** as well as worn or defective components at an early stage.

Check the chain for wear **(g)** and relubricate **(h)** after cleaning and drying (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 the rear shock 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.

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!

While cleaning, watch out for cracks, 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.

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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 **(a)** or to check the tire pressure regularly **(b)**. Clean your MERIDA bike and protect it against corrosion. Your MERIDA dealer has special cleaning agents, e.g. spray wax.

Remove the seat post **(c)** 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 **(d)**. 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!

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 2,000 and 3,000 km or 100 to 150 hours of use a year.

If you consistently ride more or if you ride a great deal on poor road surfaces, the service periods will shorten accordingly.

Component	What to do	Before every ride	Monthly	Annually	Other
Lighting	Check function, if necessary	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 (mechanical disc brakes)	Lever travel, brake pads and test brakes in stationary	x			
Brakes, brake pads (rim brakes)	Clean		x		
Brake cables, pads hoses	Visual inspection		x		
Brakes (disc brakes)	Check lever travel, wear of brake pads, check seals, test brakes in stationary	x			
	Replace liquid (DOT-liquids)			•	
Rims (of rim brakes)	Check thickness, replace if necessary				• after 2nd set of brake pads at the latest
Fork	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
Crank	Check and retighten, if necessary		x		
Painted/anodized/carbon surfaces	Impregnate				**x** at least every 6 months

Component	What to do	Before every ride	Monthly	Annually	Other
Wheels/spokes	Check for trueness and tension		x		
	True or retighten				• if necessary
Handlebars and stem (aluminum and carbon)	Check and replace, if necessary				• at the latest every 2 years
Headset	Check for bearing play		x		
	Regrease			•	
Metal surfaces	Polish (except: Rim sides of rim brakes, rotors)				**x** at least every 6 months
Hubs	Check for bearing play		x		
	Regrease			•	
Pedals (all)	Check for bearing play		x		
Pedals (clipless)	Clean and grease locking mechanism		x		
Seat post/stem	Check bolts		x		
	Dismount and re-lubricate				
	Carbon: new assembly paste (no grease!)			•	
Front/rear derailleur	Clean and grease		x		
Quick-releases	Check seat	x			
Bolts and nuts (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 bike 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 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 the proper fit of the component in between. 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)	Campagnolo[3] (Nm)
Rear derailleur	Mount (on frame/derailleur hanger)	8 - 10	5 - 7	15
	Cable clamp	5 - 7	5 - 7	6
	Pulley wheels	2.5 - 3		2.7
Front derailleur	Mount on frame	5 - 7	5 - 7 (clamp) 5 - 7 - (direct mounting)	5 (clamp) 7 (direct mounting)
	Cable clamp	6 - 7	5	5
Brake levers/shifter units	Mount on handlebars	6 - 8	6 - 8	10
	Flatbar			6
Hub	Quick-release lever	5 - 7.5		
	Counter nut for bearing adjustment with quick-release hubs	15 - 17		
	Sprocket cluster lock ring	30 - 50	40	40 (11-speed) 50 (10-speed)
Crank	Crank mount (grease-free square-head)	34 - 44		32 - 38
	Crank mount (Shimano Octalink)	35 - 50		
	Crank mount (Shimano Hollowtech II)	12 - 14		
	Crank mount (Isis)		31 - 34 (pedal thread) 43 - 48	
	Crank mount (Giga X Pipe)		48 - 54	
	Splined			42
	Axle fastening bolt Ultra Torque			42 - 60
	Chainwheel mount	8 - 12	12 - 14 (steel) 8 - 9 (alu)	8

Component	Bolted connections	Shimano[1] (Nm)	SRAM/Avid[2] (Nm)	Campagnolo[3] (Nm)
Sealed cartridge bearing	Shell (square-head)	50 - 70		70
	Shell (Shimano Hollowtech II, SRAM Giga X Pipe)	35 - 50	34 - 41	35 (Ultra Torque)
	Octalink	50 - 70		
Pedal	Pedal axle	35	47 - 54	40
Shoe	Cleat	5 - 6		
Brake	Brake body fastening	8 - 10 (Dual Pivot) 5 - 7 (V-Brakes)	8 - 10	10
	Cable clamp	6 - 8	6 - 8	5
	Brake shoe mount	5 - 7 (Dual Pivot) 6 - 8 (V-Brakes)	5 - 7	8
	Brake pad fixing	1 - 1.5	0.5 - 1	
Seat post	Patent clamping (saddle at seat post)	20 - 29		18 - 22

[1] www.shimano.com [2] www.sram.com [3] www.campagnolo.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 /4.5
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

Component	Shimano[1] (Nm)	Avid[2] (Nm)	Tektro[3] (Nm)	TRP[4] (Nm)	Magura HS[5] (Nm)
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	2 - 4	4
Bleeding device brake lever			2 - 4		4
Brake disc fixing (6-holes)	4	6.2	4 - 6	6 - 8	
Brake disc fixing (centerlock)	40 - 50				
Hose (union nut) direct connection	5 - 7				4
Slave cylinder (bleeder screw)					4
Brake pad retainer at brake caliper	0.2 – 0.4		3 - 5		
Cable clamp at brake caliper				4 - 6	

[1] www. shimano.com [2] www.sram.com [3] www.tektro.com [4] www.trpbrakes.com [5] www.magura.com

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 road bike shall ensure that the road 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

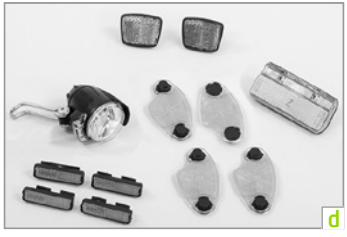
If you use your bike for riding on public roads **(a+b)**, it has to be equipped according to the regulations of your country.

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.

a

b

c


d

Warranty and guarantee

Your MERIDA bike was manufactured with great care. Normally it is delivered to you by your MERIDA bike 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 complaint, it is necessary to present your receipt, your bike card, the handover report and the service reports. 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 these operating instructions or in any other operating instructions enclosed with this delivery (see the chapter "Service and maintenance schedule") as well as any instructions concerning the replacement of safety-relevant components such as handlebars or brakes etc.

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 bikes 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. The following parts which have reached their limit of wear must be replaced:

Drive chain
Brake pads
Brake fluid (DOT)
Brake discs/rotors
Brake cables
Brake cable housings
Rims/rim sides (of rim brakes)
Incandescent bulbs/LED
Rubber gribs
Chainwheels
Chainstay protection
Handlebar tape
Lamps
Tires
Sprockets
Saddle covering
Pulleys
Bowden cables
Bowden cable housings
Lubricants

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 handover report and the bike card stating the date of purchase, the dealer address, the model and the 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 for 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 bicycles' 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.
P.O. Box 56
Yuanlin Taiwan R.O.C.
Phone: +886-4-8526171
Fax: +886-4-8527881
www.merida-bikes.com

Service schedule

1st service – After 100 – 300 kilometers or 5 – 15 hours of use
or after three months from date of purchase at the latest

Order no.: Date:

Replaced or repaired parts:

Stamp and signature
of the MERIDA dealer:

2nd service – After 2,000/3,000 kilometers or 100/150 hours of use
or after one year at the latest

Order no.: Date:

Replaced or repaired parts:

Stamp and signature
of the MERIDA dealer:

3rd service – After 4,000 kilometers or 200 hours of use
or after two years at the latest

Order no.: Date:

Replaced or repaired parts:

Stamp and signature
of the MERIDA dealer:

4th service – After 6,000 kilometers or 300 hours of use
or after three years at the latest

Order no.: Date:

Replaced or repaired parts:

Stamp and signature
of the MERIDA dealer:

5th service – After 8,000 kilometers or 400 hours of use
or after four years at the latest

Order no.: Date:

Replaced or repaired parts:

Stamp and signature
of the MERIDA dealer:

6th service – After 10,000 kilometers or 500 hours of use
or after five years at the latest

Order no.: Date:

Replaced or repaired parts:

Stamp and signature
of the MERIDA dealer:

7th service – After 12,000 kilometers or 600 hours of use
or after six years at the latest

Order no.: Date:

Replaced or repaired parts:

Stamp and signature
of the MERIDA dealer:

8th service – After 14,000 kilometers or 700 hours of use
or after seven years at the latest

Order no.: Date:

Replaced or repaired parts:

Stamp and signature
of the MERIDA dealer:

9th service – After 16,000 kilometers or 800 hours of use
or after eight years at the latest

Order no.: Date:

Replaced or repaired parts:

Stamp and signature
of the MERIDA dealer:

10th service – After 18,000 kilometers or 900 hours of use
or after nine years at the latest

Order no.: Date:

Replaced or repaired parts:

Stamp and signature
of the MERIDA dealer:

11th service – After 20,000 kilometers or 1,000 hours of use
or after ten years at the latest

Order no.: Date:

Replaced or repaired parts:

Stamp and signature
of the MERIDA dealer:

12th service – After 22,000 kilometers or 1,100 hours of use
or after eleven years at the latest

Order no.: Date:

Replaced or repaired parts:

Stamp and signature
of the MERIDA dealer:

Bike card

Manufacturer _____

Model _____

Frame no. _____

Frame type _____

Frame size _____

Color _____

Wheel / tire size _____

Special features _____

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)

Intended use

☐ Category 0
☐ Category 1
☐ Category 2
☐ Category 3
☐ Category 4
☐ 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	**Brake assignment**
Right lever	☐ Front wheel brake
	☐ Rear wheel brake
Left lever	☐ Front wheel brake
	☐ Rear wheel brake

Read chapter "Before your first ride" in this MERIDA user manual.

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
- ☐ 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! adjustment, function)
- ☐ 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, 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

- ☐ Pedal system
- ☐ Others

Customer:

Last name, first name _____

Street _____

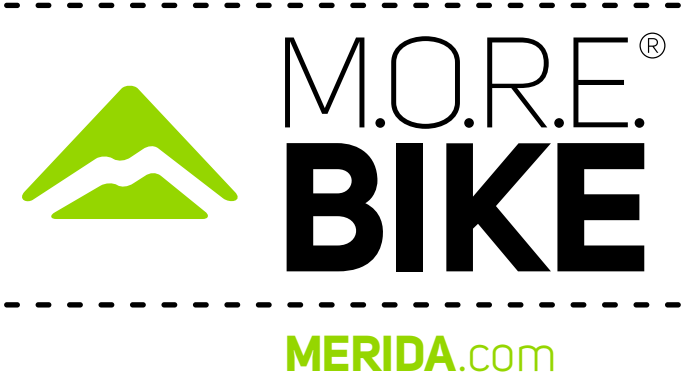
ZIP code/city _____

Phone _____

Fax _____

E-Mail _____

Location, date, signature _____


M.O.R.E.®
BIKE
MERIDA.com

MERIDA.com

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