

MERIDA

**ADDITIONAL MOUNTING INSTRUCTIONS
AND USER MANUAL FOR ROAD BIKES WITH
CARBON FORK STEERER TUBE**



MERIDA additional mounting instructions and user manual for road bikes with carbon fork steerer tubes



Table of contents

Some notes on this MERIDA additional mounting instructions and user manual	1
Checking and adjusting the headset	2
Adjusting the height of the handlebar	3
Shortening the fork steerer tube	5
Annual visual inspection	8
Tips on how to choose suitable stems	9

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 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.



Works on carbon fork steerer tubes should be carried out by experts and professionals, because they require experience and suitable tools. If you are in doubt or if you have any questions, contact your MERIDA dealer.

Some notes on this MERIDA additional mounting instructions and user manual

Forks with carbon steerer tubes combined with light stems reduce the weight of a road bike by 300 to 400 grams compared to standard components. The combination of these two parts harbors, however, a higher risk potential. For this reason the height adjustment with spacers or through stem replacement already requires an absolute duty to take care. Do not work on the carbon fork steerer tube of your MERIDA road bike, if you do not have the skills of a bicycle mechanic needed or the special tools required.



This supplementary, specific MERIDA carbon fork manual will tell you what you need to consider when choosing a stem or adjusting the headset.

The following tools and auxiliary devices are absolutely necessary:

- torque wrench (torque range starting from 3 Nm) with bits
- Allen key
- spanner
- carbon assembly paste and grease
- cloth

For fork steerer tube shortening needed in addition:

- bow saw with carbon saw blade or metal saw blade with 24t at least
- saw guide or and old stem
- flat and round file
- fine emery cloth
- super glue or clear coat
- protective gloves and mouth protection

Checking and adjusting the headset

a Activate the front wheel brake. Position the fingers of the other hand around the upper head tube race, bring your weight on the saddle and try to move your MERIDA road bike back and forth. If the head tube races come out of alignment relative to the frame, there is play in the headset.



b Loosen the clamp bolts on the stem side until the stem can be turned relative to the fork. In most cases two to three turns will do. Do not unscrew these bolts completely.



c Tighten the upper adjusting bolt in small increments, that is to say in half turns at maximum, until there is slight resistance. Do not tighten the upper adjusting bolt fully!



Do not ride when there is play in the headset. Check the headset at regular intervals, e.g. once a month.

d Grab your MERIDA road bike by the top tube, lift it up until the front wheel spins freely and check whether the front wheel turns easily from the left to the right. Front wheel and handlebar must move easily from their position in the middle when you tap them slightly. If they do, set your MERIDA road bike down.



e Check and adjust until these two examinations are performed successfully. As soon as the headset is free of play and smooth running, align the stem. Make sure the stem is in line with the front wheel; if it is, the handlebar is in the right position.



f Tighten the clamp bolts evenly on the stem side. Use a torque wrench and observe the specified torque values. Start with a torque value of 4 Nm and increase the value in increments of 0.5 Nm until the stem fits tight on the fork or until you have reached the maximum permissible torque value of the stem. Do not exceed the torque value of 6 Nm.



g Finally, check whether the stem is securely clamped in place. Position yourself in front of your MERIDA road bike and clamp the front wheel between your knees. Take hold of the brake levers and try to rotate the handlebar downwards and then to the side relative to the fork.



h If you succeed, loosen the bolts on the side again and realign the handlebar including stem, as described above. Tighten the bolts to the higher value within the torque range.



i If this is still not enough, you have to dismount the stem, to clean all clamping areas carefully with an absorbing cloth and to apply a new coat of carbon assembly paste.



Proceed with the adjusting steps described above.

i Check the headset for play and the secure clamping of the stem after 100 to 300 km (62 to 186 miles) and subsequently every 2,000 km (1,240 miles).

Adjusting the height of the handlebar

a Unscrew the lateral stem screws by two to three turns. Unscrew the top adjusting bolt completely and remove it together with the cap. Keep in mind that the fork is loose after you have unscrewed the bolt. If you have mounted your MERIDA road bike into a work stand, the fork can slide out of the frame suddenly.



b Have a look at the position of the stem relative to the fork steerer tube. The upper edge of the fork steerer tube must be about 2 to 4 mm underneath the upper edge of the stem or the spacers depending on the type of the cap. This state should be restored after the modification, otherwise the headset cannot be adjusted anymore.



c Keep the fork tight and remove the stem from the fork steerer tube. Now you can arrange the spacers according to your wishes from the bottom to the top. They can be arranged in any order, but do not remove or add any spacers. Keep in mind that the stem should not press directly on the upper bearing cup race of the headset. Therefore, position at least one thin spacer underneath the stem



e If there are no sufficient adjustment options, most stems can be mounted the other way round. These stems, also referred to as flip-flop stems, allow for two different handlebar heights. Check first whether the cables and lines are long enough. Loosen the front bolts of the handlebar faceplate completely.




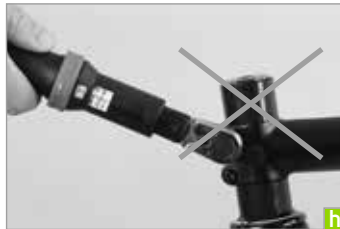
f Remove the faceplate and the handlebar. Remove the stem from the fork steerer tube and turn the stem by 180°. Apply a thin coat of fresh carbon assembly paste on the inner side of the stem clamp and the outer side of the fork steerer tube.



g Slide the stem on the fork steerer tube, including 5 mm spacers, as needed, place the headset cap on the stem and re-position the adjusting bolt.



 Spacers above the stem are only permitted for the duration of a test run. If you have found the correct handlebar position, the fork steerer tube must be shortened immediately (see chapter "Shortening the fork steerer tube" **h**).



i Apply carbon assembly paste between faceplate, stem and on the clamping surfaces of the handlebar. Position the handlebar in the middle. The markings will help you.



k Tighten the bolts slightly until the handlebar is only just clamped. Align the handlebar in a way that the handlebar ends are at least in horizontal position or point slightly downwards. The brake levers are then horizontal in the grip area.



l Tighten the bolts of the faceplate carefully and evenly and make sure the upper and the lower clamping slots are identical in width and in parallel.



m Take the torque wrench and tighten the bolts in a cross pattern to one Nm less than the imprinted maximum torque range.



n Position yourself in front of your MERIDA road bike and put your weight on the brake levers. Make sure the handlebar does not rotate downwards.



o If there is movement, loosen the bolts again by two turns, make a re-alignment and proceed with the fastening, as described above.



p Increase the torque value to the maximum value permissible for the stem or the handlebar. The lower value is what counts.



Finish by proceeding as described in chapter **“Checking and adjusting the headset”**.



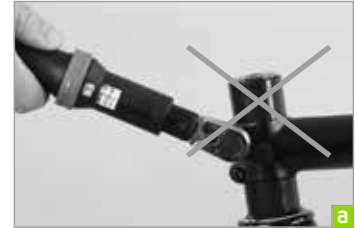
Make sure the stem does not press directly on the upper bearing cup race of the headset. Therefore, position at least one 5-mm-thin spacer underneath the stem.



Do not run any risk, replace unsuitable stems and, if necessary, third-party products. Your MERIDA dealer will help you choose the proper stem.

Shortening the fork steerer tube

a + b Do not ride at long-term with a provisionally modified position with several spacers above the stem, because its clamping does not act in the reinforced area of the fork steerer tube. Increased risk of breakage.



c If you want to lower the handlebar, you need to remove spacers. Shorten the fork steerer tube immediately after having found the proper position in a test ride. But keep in mind that a shortened fork steerer tube cannot be lengthened again.



To find the proper position, proceed as described in chapter **“Adjusting the height of the handlebar”**.



Carbon fork steerer tubes are among the most sensitive components of the entire road bike. This professional work must therefore be performed with extreme care. Improper processing may result in breakage and thus in accident! Ask your MERIDA dealer to perform this work.

d Dismount the upper bolt including cap and remove the spacers positioned above the stem.



e Mark the upper edge of the stem on the fork steerer tube.




f Dismount the fork completely from the head tube of the frame. In doing so, keep the position of the parts in mind and place them aside one after the other.



g Do not clamp the fork into a vice to cut it, as this could damage the fork steerer tube! Use a special-purpose saw guide instead.



Alternatively you can use an old stem and cut precisely along its upper edge. Both options have the advantage to produce a straight cut and to prevent any splaying of the fibers.

 Observe the maximum permissible spacer height of 5 mm as a minimum and 40 mm as a maximum underneath the stem in general. The permissible spacer height above the stem is 5 mm, if at all.


h Position the saw blade approx. 2 mm underneath the marked line. This difference is to allow headset adjusting at a later date. If the Ahead®-cap collar reaches deeper than 1 mm into the stem, you may have to cut off a little more. Make sure in any case that the fork steerer tube will have enough support inside the stem after shortening.




i Unfold a damp cloth under the fork steerer tube which is to collect the sawdust. Shorten the steerer tube with a specific carbon saw blade or with a new, i.e. very sharp 24t metal saw blade.



Saw with little pressure to make sure the fibers in the steerer tube do not splay. Do not blow off or sweep the saw chips. Wipe off the cut surface instead by using a damp cloth.

 Carbon dust is suspected of causing cancer. For this reason be sure to use a mouth protection and protective gloves when carbon is sawed, filed or the like.

 Never blow off carbon dust, otherwise the fine dust will be distributed in the air. Wipe it off with a damp and absorbing cloth instead.

k Deburr the outside of the cut slightly with a fine-toothed flat file and the inside with a fine round file. Work the file with little pressure along the fiber direction, i.e. by tendency along the direction of the steerer tube and in general only towards the end.



Lift the file at the end and do not bring it back on the steerer tube. Smoothen, if necessary, by using sand paper.



l Seal the cut with two-component adhesive, super glue or with clear coat. This is to also glue the fibers which may have splayed. Let the glue flash off.



m Clean the areas of the headset with an absorbing cloth. Apply some grease on the lower crown race as well as on the bearings. Assemble the bottom parts of the headset and slide the fork into the head tube of the frame.



When you have wiped off all saw chips, dispose of the cloth in your household waste.

n Apply a little grease in the upper bearing area and on the upper race.



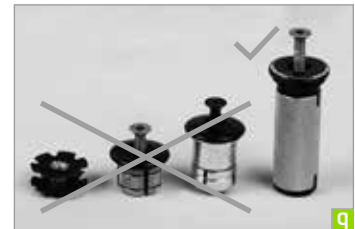
o However, do not apply grease or oil on the steerer tube in the clamping area of the stem, as this will prevent its tight clamping!



p Slide the planned number of spacers on the fork steerer tube. Apply some carbon assembly paste on the inner side of the stem clamping area and on the outer and the inner side of the fork steerer tube. Slide the stem on the steerer tube and turn the bolts until the stem is only just tight.



Do not use a star nut made of steel as counterbearing or non-MERIDA expanders for mounting and adjusting the headset. Use the snugly fitting original MERIDA clamp mechanism exclusively. These expander clamps also reinforce the steerer tube from inside to ensure that the stem does not damage the fiber material **q.**



r Dismantle the expander cone, if possible. Check whether it is free of burrs etc. that might prevent a smooth sliding of the parts. Be sparing with grease when lubricating the sliding surfaces, the threads and the area under the screw heads. Keep the outer side free of any lubricant, otherwise the support will no longer clamp. Apply carbon assembly paste on the outer side of the mechanism.



r

s + t Insert the mechanism until the cap lies flush. The indication FRONT must show in direction of motion. Keep hold of the cap with a 24-mm spanner and tighten the inner bolt to a torque of 8 Nm.




s

u Slide the stem on the tube, mount the Ahead®-cap and adjust and tighten the stem, as described in chapter "Checking and adjusting the headset".



t

 **Make sure the stem fits snugly after having slid it on. Do not mount stems that have play on the fork steerer tube.**



u

Annual visual inspection

MERIDA has identified a potential safety issue in the case of MERIDA forks and MERIDA expanders being combined and mounted together with some stems and spacers.

a + b In certain cases the fork steerer tube may be affected by cracks which can result in total failure. This ultimate total failure could happen suddenly during the ride, which could lead to a fall resulting in serious injuries or even death.

Therefore, carry out this check once a year or immediately, if you have not checked it before.

c Remove the front wheel, the front wheel brake, the stem and then the complete fork, as described above. Clean the steerer tube and the stem inside with an absorbing cloth. Check whether the steerer tube is in sound condition.

Do not use further damaged forks. Ask your MERIDA dealer for advice, they will offer you a solution.




a



b



c

 **Check the headset for play and the secure clamping of the stem after 100 to 300 km (62 to 186 miles) and subsequently every 2,000 km (1,240 miles).**

d MERIDA strongly advise to assemble forks and stems with the current MERIDA expanders only!

Note that the current expanders are available with two diameters. Be sure to use the latest model with a matching diameter only. You can be sure that the diameter matches when the expander fits snugly after being inserted.

e Mount the fork according to the instructions in the chapters with the new MERIDA expander and special carbon assembly paste by using a torque wrench.



Do not run any risk, replace unsuitable stems and, if necessary, third-party products. Your MERIDA dealer will help you choose the proper stem.



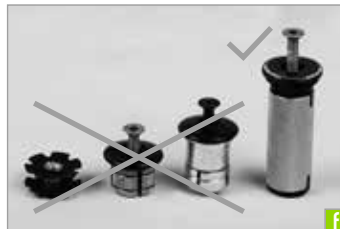
Replace unsuitable expanders by the specific MERIDA models **f.**



d



e



f

Tips on how to choose suitable stems

a Stems with segment clamps are not suitable. This kind of clamp may produce a point load on the fork steerer tube. This compromises the structure of the sensitive carbon fork steerer tube.

b Stems with many recesses in the area of the bolts and stems with a wide slot in the rear are also less suitable. This leads to a deformation of the carbon fork steerer tube and may result in damage.

c Stems with a large recess in the clamping area in the front towards the actual stem are not suitable either. This means that the fork steerer tube is not supported by the upper edge of the stem or only on a few millimeters!

d Inside the stem there should be a collar of 7 mm at least in the upper and in the bottom area. Measure these areas. This is due to the fact that for adjusting the headset a height difference of 2 to 3 mm must be provided between the upper edge of the fork steerer tube and the upper edge of the stem.



a



b



c



d

e Suitable stems have a closed clamp with narrow slot, with symmetrical outer clamping, with sufficiently large areas providing support at the top and bottom of the clamp in the front area and with a rough surface on their inside. The steerer tube clamp of the stem must not measure less than 38 mm and more than a maximum of 45 mm.



f If you have found a suitable stem, make sure the stem is free of burrs. There are occasional samples which have passed the quality control although they are not completely free of burrs. Replace the stem, if necessary.



g Observe the maximum permissible spacer height of 5 mm as a minimum and 40 mm as a maximum underneath the stem in general. The permissible spacer height above the stem is 5 mm, if at all.



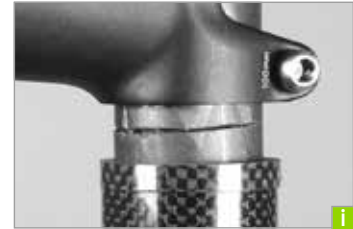
i As MERIDA cannot check all combinations, the use of non-MERIDA stems or expanders voids the warranty.

h Be sure to exclusively use the MERIDA expanders available with the two outer diameters 23.6 mm and 24.2 mm. Choose the suitable model that can be slid over the fork steerer tube without play and that fits snugly.



⚠ Do not run any risk, replace unsuitable stems and, if necessary, third-party products. Your MERIDA dealer will help you choose the proper stem.

⚠ Stems that are not suitable for carbon fork steerer tubes can compromise the steerer tube structure **!** Risk of an accident! Have the stem released by the MERIDA service in case of the slightest doubt.



If you have any questions whatsoever related to this manual, do not hesitate to contact your dealer or contact your national MERIDA distributor indicated at the back-cover of this manual.

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

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