

# *R5ca*

Instruction book



THM R5ca\_1\_en, 2011-03



Don't forget that your THM fork is a lightweight carbon design.

Be aware of this when carrying out assembly and maintenance work and when handling the fork. Proceed with utmost care!

### **Tools required in this manual for assembly**

- Metric allen wrenches – 4mm to 6mm.
- Threadless saw guide for carbon steerers (Park Tool part number SG-6 or equivalent).
- Composite blade or fine-tooth hacksaw.
- File or emery cloth.
- Torque wrench with 1 to 12 N·m (9 to 106 lbf·in) range with metric allen key attachments.
- Tape measure or ruler.
- Masking tape (to tape area where fork is cut).
- High quality bicycle grease.
- Carbon assembly compound.

**Instruction book**

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## Preface

This manual is an integral part of your THM fork and it provides you with information regarding the safe operation of your THM R5ca racing fork.

Carefully read this manual prior to installing your THM fork. Always read and observe all of the assembly and maintenance instructions in this manual, as well as those provided in the manuals of other manufacturers whose products are used on your bicycle (headset, stem, brakes, frame, wheels etc.).

If there is a conflict in the manuals please contact the manufacturer for advice or seek help from a qualified bicycle mechanic at you local dealer.

### **WARNING**

**Failure to follow the information contained in this manual could result in the premature and sudden failure of the fork and result in an accident and fatal or serious injury.**

You will encounter the following symbols and references in this manual:

-  The index instructs you to perform a particular action.
-  The arrow indicates the consequence of your action.

### **WARNING**

**This safety message indicates a hazardous situation which, if not avoided, could result in fatal or serious injury.**

### **CAUTION**

**This safety message indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.**

### **NOTICE**

This message warns of a risk of material damage.



This refers to additional information or tips.

Retain this manual for other users of your THM fork.

Make sure that all users read, understand and observe this manual.

If you ever sell or give away your THM fork, this manual should be transferred to the new owner. This manual is also available at [www.thm-carbon.de](http://www.thm-carbon.de) >>> **Service**.

We hope you get a lot of joy from your THM fork!

*Your THM-Carbones Team*

## Intended use

### **⚠ WARNING**

**Any use other than the intended use can lead to accidents resulting in fatal or serious injury.**

THM racing forks are designed exclusively:

- for installation on standard race and time trial bikes.
- for use on a paved or tarred surfaces (streets/roads).

## Fundamental safety precautions

The following warnings for the THM forks apply to all models, unless otherwise specified. Product life is often related to the type of riding you do and your treatment of the bicycle. The fork warranty is not meant to suggest that the fork cannot be broken within the warranty period – it only means that the fork is covered subject to the terms of the warranty

Always remember that riding a bicycle involves potential danger for the rider and other road users, as well as for the bicycle and its components.

Even if protective equipment and safety devices are used, accidents resulting in death or serious injury can still occur.

**You should therefore use your common sense and avoid any unreasonable behaviour!**

## Assembly & maintenance

### **⚠ WARNING**

**There is a risk of accident caused by assembly and maintenance work which has not been conducted in a professional manner.**

- Do not overestimate your technical ability. All assembly and maintenance work should be performed by a specialty bicycle retailer. This is the only guarantee of having this work done in a professional way.
- Observe and follow all assembly and maintenance notes in this manual and in the manuals provided by third party manufacturers whose products you have used on your bicycle (headset, stem, brakes, frame, wheels etc.). If there is a conflict in the manuals please contact the manufacturer for advice or seek help from a qualified bicycle mechanic at your local dealer.
- Always observe the minimum and maximum values specified – see **Technical specifications**, page 9.
- Only use suitable, undamaged, high-quality tools recommended in this manual – see **Tools required in this manual for assembly**, page 2.
- When conducting assembly steps that require a specific tightening torque, always use an appropriate torque wrench that is designed for the tightening torque specified.
- Only ever use original THM fork components which are available from your specialty bicycle dealer or directly from THM.
- Never make any modifications to your THM fork beyond the installation procedures described in this manual.
- Always ensure your bicycle is maintained in a flawless condition. Care and maintenance will prolong the service life of your bicycle and its components and also improve your personal safety.

## On the road

### **⚠ WARNING**

**There is a risk of accident caused by erratic riding behaviour or improper equipment.**

- Always ride with foresight, attention and a readiness to brake.
- Adjust your speed to the prevailing conditions (traffic, weather, visibility etc.).
- Do not use your THM fork at ambient temperatures below -10°C (14°F).
- Do not exceed the maximum overall weight for which your THM fork have been approved – see **Dimensions**, page 9.
- Do not perform jumps with your bicycle as this generates an enormous amount of force.
- Always comply with the traffic regulations that are in force in the country where you are using your bicycle.
- When riding your bicycle you should always wear a high quality cycling helmet (e.g. ANSI certified) that is in excellent condition. Your clothing should be close-fitting but not restrictive.
- Only ride your bicycle if you are in good physical condition and your bicycle and all of its components are operating in a flawless manner.
- If you are involved in any fall where there is any damage to the bike at all you should not continue to ride your bicycle until after it is thoroughly inspected and/or repaired. Some fork damage may not be visible until the fork is removed. Even then some latent damage may not be visible. When in doubt replace the fork or contact us.  
In your own interest you should treat all of the components on your bicycle which have been produced by other manufacturers in the same manner.

## Transport & storage

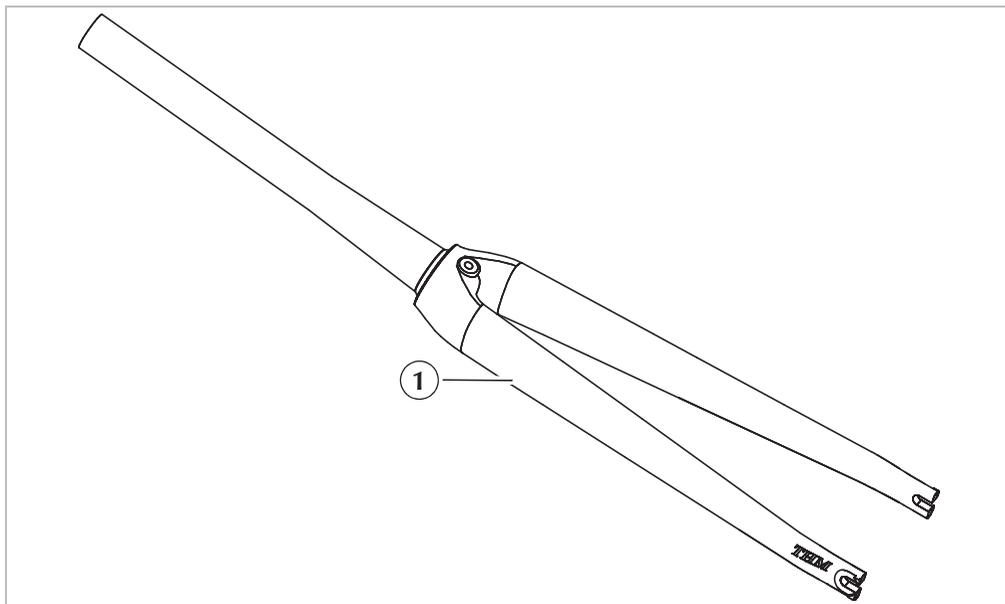
### **⚠ WARNING**

**There is a risk of accident caused by damaged bicycle components.**

- Always transport your bicycle in an appropriate and careful manner.
- When transporting your bike in a bag or other similar product always secure a spacer (100mm) between the dropouts of the THM fork.
- Never lock up your bike without the front wheel attached and do not transport it on roof racks or bike racks without additional lateral support to the frame (i.e. never use a rack that supports only the front fork and rear wheel). Never use roof racks, bike racks or stationary trainers that require you to use your THM fork without the front wheel attached.
- Do not store your THM fork at an ambient temperature below -15°C (5°F) or above 55°C (131°F) as it can damage the fork.

### **Risk of accident.**

- This fork and bicycle are not intended for use by children under 13 years of age.
- Do not allow children to play with your bicycle or fork.



## Delivery specifications

### 1 Fork

Instruction book

### also shipped in your fork box:

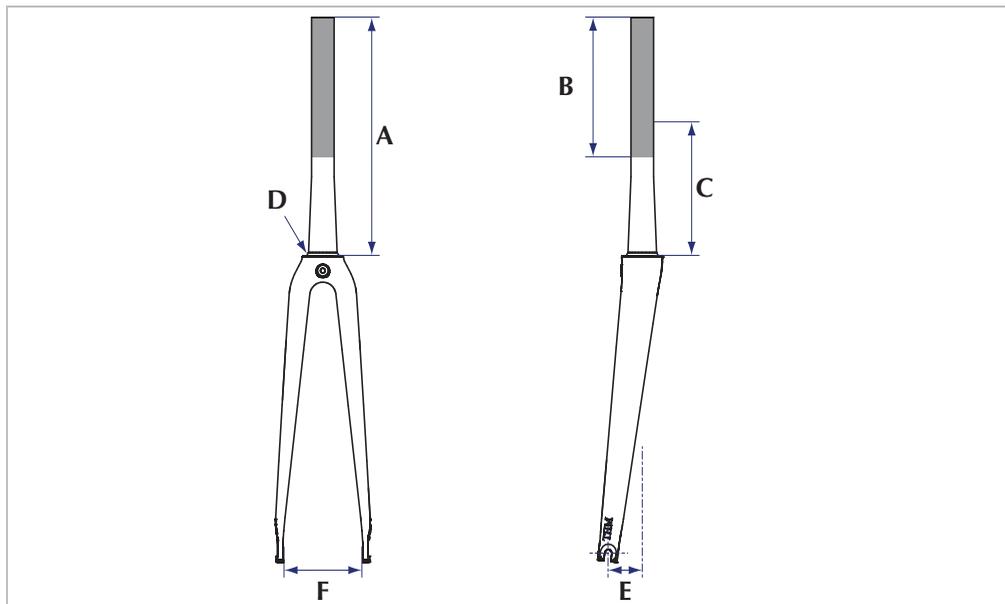
18 mm front brake sleeve nut

39mm of spacers

Carbon assembly compound (Tacx brand or equivalent)

Stem top cap

M6 stem top cap bolt



### Dimensions

		R5ca-43	R5ca-53
<b>A</b>	Steerer tube (1.125" diameter)	320	230
<b>B</b>	Clamping area	190	130
	Internal diameter Stem clamping	28.60 ±0.05	
<b>C</b>	Steerer tube, minimum length	160	140
<b>D</b>	Installation angle	54°	
<b>E</b>	Fork rake	43	53
<b>F</b>	Installation dimension (hub width)	100	
	Tyre dimensions, max.	33 (width); 688 (outer diameter)	
	Weight	g	300
	Total system weight, max.**	kg(lb)	120(265)

\* Technical specifications, dimensions and weights are to be understood with the corresponding tolerances and can differ slightly from your THM fork.

\*\* Total system weight = rider + bicycle + luggage

### Tightening Torques

	N·m (lbf·in) max.
Tensioning screw (top cap)	6 (53)
Clamping screws in stem	10 (89)
Sleeve nut for front brake attachment	12 (106)

## Installing the fork

### ⚠ WARNING

**If not properly performed, assembly and maintenance work can cause accidents resulting in serious or fatal injury.**

-Do not overestimate your technical ability. All assembly and maintenance work should be performed by a specialty bicycle retailer. This is the only guarantee of having this work done in a professional way.

## Shortening the steerer tube



In most cases it will be necessary to shorten the steerer tube of your fork to the correct dimension.

It is imperative you read and observe the safety and assembly information provided by the manufacturer of the headset.

### ⚠ WARNING

**There is a risk of accident due to sudden unexpected failure of the fork while riding if any carbon fibers on the fork are damaged during any installation procedure or by clamping the stem outside the clamping area.**

-The length of the steerer tube should never fall below the minimum required length.  
-Make sure the entire clamping section of your stem is within the clamping area of the steerer tube.

– see **Dimensions, page 9**

### ⚠ CAUTION

**There is a risk of damage to health caused by inhaled dust.**

-Wear a dust mask when shortening the steerer tube.

**There is a risk of injury.**

-Wear protective gloves when sawing the steerer tube.

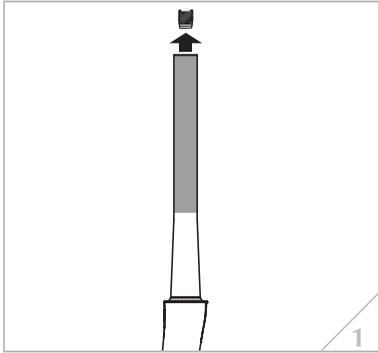
### NOTICE

Once the steerer is cut too short the fork is ruined.

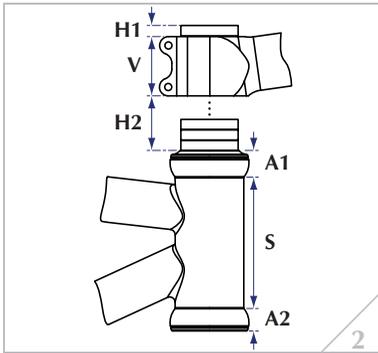
-Measure the length to be cut extremely carefully and check this measurement again before shortening the steerer tube of your fork.  
-It is better to use an extra spacer at the first shortening step. The fork can be further shortened if necessary at a later date.

Risk of damage to the carbon fibres.

-Never use a pipe cutter to shorten the steerer tube.  
-Only use a composite blade or sharp fine tooth hacksaw for this purpose.  
-Wrap the area to be cut with masking tape to prevent fraying of carbon fibres. Remove carefully by pulling in the direction of the fibres once complete



- ☞ Unscrew the aluminium insert from the steerer tube. (fig. 1)

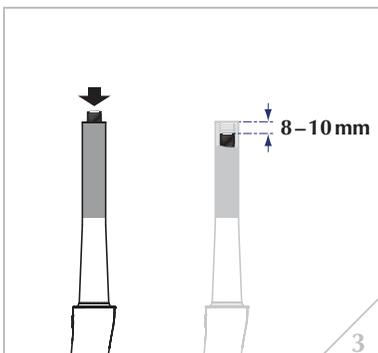


- ☞ Formula to determine the correct length of the steerer tube:

- H1** Top Spacer (**5 mm recommended!**)
- V** Clamping height – Stem
- H2** Lower Spacer Stack (**max. 40mm!**)
- A1** Overall height/top – Headset
- S** Height – Head tube (frame)
- A2** Overall height/bottom – Headset

$(A1 + A2 + S + H1 + H2 + V) - 2mm =$  Steerer tube desired/optimal length

(fig. 2)



- ☞ Shorten the steerer tube to the desired dimension. Be sure to cut exactly at a right (90 degree) angle!
- ☞ Use a file to remove all burrs from the edge.
- ☞ Exerting gentle pressure turn the aluminium insert approximately 8–10mm into the steerer tube. Take care to keep the insert straight!

(fig. 3)

## Installing the lower bearing

**⚠ WARNING**

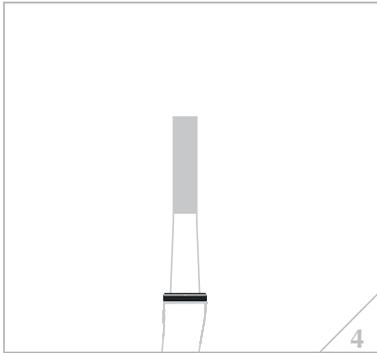
**There is a risk of accident due to sudden unexpected failure of the fork while riding if any carbon fibers on the fork are damaged by improper assembly.**

-Only use the original headset that is supplied with your fork.



It is imperative you read and observe the safety and assembly information provided by the manufacturer of the headset.

- ☞ Fit the lower bearing of your headset onto the steerer tube without using any lubricant or grease. Be careful to orient the lower bearing correctly. (fig. 4)



## Fitting the fork to the head tube

**⚠ WARNING**

**There is a risk of accident due to sudden unexpected failure of the fork while riding if any carbon fibers on the fork are damaged during any installation procedure.**

- Inspect all components (stem, spacers, headset) to ensure there are no sharp or rough edges on any surfaces that could damage the steerer tube. If problems are detected, repair or replace the components before installing.
- Make sure all stem clamping edges/surfaces are free from burrs and have no sharp edges. Remove all burrs as required with a fine file.
- Make sure the entire clamping section of your stem is within the clamping area of the steerer tube – see **Dimensions**, page 9.
- Make sure the internal diameter of the clamping section for your stem corresponds with the required dimensions – see **Internal diameter Stem clamping**, page 9.
- Never exceed the max. permissible height of the lower spacers. (fig. 5)
- Never exceed the max. permissible overlap of the top spacer or stem. (fig. 5)
- Never exceed the tightening torque of 6 N·m (53 lbf·in) under any circumstances when tightening the top cap adjusting screw. (fig. 6)
- Never exceed the tightening torque of 10 N·m (89 lbf·in) when tightening the steerer tube clamping screws on your stem. Also never exceed the maximum tightening torque for the clamping screws on your stem if the stem maximum is under 10 N·m (89 lbf·in). (fig. 7)
- Never use your fork if you hear any cracking or clicking noises when tightening the stem clamping screws – if such a case occurs, please send us your fork for inspection immediately.

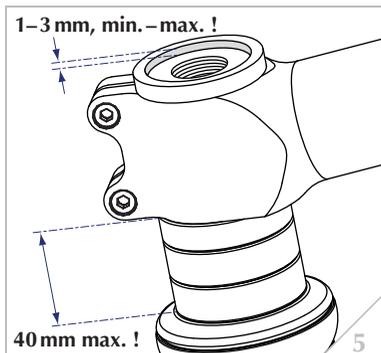
**There is a risk of accident due to sudden unexpected loss of control while riding if the stem slips on the fork steerer.**

- Never apply any lubricant or grease to the steerer tube.



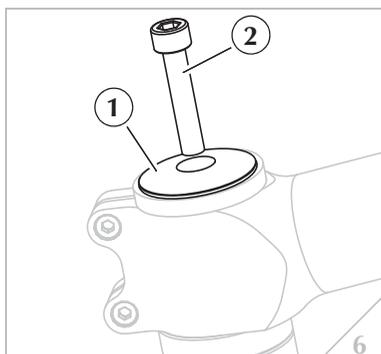
Applying an appropriate carbon assembly paste between the stem clamping area and steerer tube enables the required tightening torque to be reduced to achieve the same clamping force.

- ☞ Apply carbon assembly paste to the clamping area between the stem and steerer tube if required.



- ☞ Assemble the fork, spacer, stem and headset in the head tube of your bike frame in accordance with the manufacturer's instructions. Ensure that the split in the compression ring of the headset is oriented towards the side of the steerer tube, never towards the front or back!
- ☞ Make sure that an overlap of **1 mm to max. 3 mm** is present between the upper edge of the top spacer (recommended!) and between the upper edges of the stem and steerer tube.

(fig. 5)

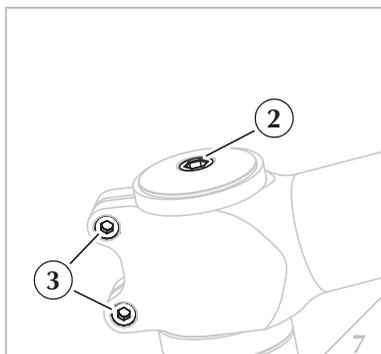


- ☞ Install the headset cap (1).
- ☞ Drive in the top cap adjusting screw (2) (clockwise).
- ☞ Adjust the headset according to the instructions of the manufacturer.
- ☞ Align the stem in a straight forward position along the axis of the front wheel and fork so that all are aligned straight ahead.

(fig. 6)



It is imperative you read and observe the safety and assembly information provided by the manufacturer of the stem.



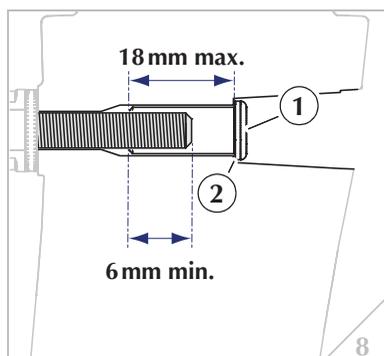
- ☞ Tighten the clamping screws (3) on the stem initially by using half of the maximum tightening torque specified by the stem manufacturer (not exceeding that of the fork).
- ☞ Check the stem to make sure it is seated correctly.
- ☞ If necessary, tighten the clamping screws (3) on your stem gradually in steps of **0.5 N·m (5 lbf·in)** until the stem no longer moves on the steerer tube when significant sideways force is applied.
- ☞ Tighten the top cap adjusting screw (2) using a tightening torque of **3 N·m (27 lbf·in)**.

(fig. 7)

## Assembling the brake body



Please read and observe the safety and assembly instructions provided by the manufacturer of your brakes.



☞ Determine the correct sleeve nut (1) for your front brake caliper.

- The maximum permissible shaft length for the sleeve nut is 18 mm.
- The sleeve nut must be capable of being screwed onto the thread of the brake bolt through at least 6 rotations (6 mm). If it cannot be then your bolt is too short and you must obtain an appropriate length bolt from the brake manufacturer.

### ⚠ WARNING

**There is a risk of accident as a result of sudden fork breakage due to carbon fibres being damaged through improper assembly.**

- Make sure the head of the sleeve nut is seated against the front shoulder (2) of the fork head hole.
- Never exceed the tightening torque of 12 N·m (106 lbf·in) when tightening the sleeve nut.

(fig. 8)

Installation of your fork is now finished. Test ride the bike on a flat surface in an area with no obstacles or cars to check for looseness or creaking sounds and also test brakes and turning motions to check cable lengths (that they don't bind and restrict turning or braking) and turning sensation (there should not be and stiffness, squeaking or binding in the turning movement). Check for any tire rubbing and that the brake pads contact the rim correctly and do not override or under ride the rim. If any of the foregoing is not correct DO NOT ride the bike. Take it to your nearest bicycle retailer for a diagnosis.

Check for wheel insertion ease and clamping of the quick release. Follow hub manufacturer instructions.

### ⚠ WARNING

**Your fork contains integral retention devices in the form of raised area machined into the base of the dropout. Do not remove or disable these devices. If the quick release is not adjusted correctly, the retention devices can reduce the risk of the wheel disengaging from the fork. Removing or disabling the retention devices will also void the fork warranty.**

**Integral retention devices are not a substitute for proper quick release adjustment. Failure to properly adjust the quick release mechanism can lead to wobble or disengagement of the wheel, which can result of loss of control and accidents resulting in fatal or serious injury.**

## Important maintenance information

### ⚠ WARNING

**If not properly performed, assembly and maintenance work can cause accidents resulting in serious or fatal injury.**

-Do not overestimate your technical ability. All assembly and maintenance work should be performed by a specialty bicycle retailer. This is the only guarantee of having this work done in a professional way.

Improperly performed assembly and maintenance work could also result in a loss of your warranty rights (liability for defects)!

### ⚠ WARNING

**There is a risk of accident caused by components damaged in installation.**

-Observe and follow all assembly and maintenance notes in this manual and in the manuals provided by third party manufacturers whose products you have used on your bicycle (headset, stem, brakes, frame, wheels etc.). If there is a conflict in the manuals please contact the manufacturer for advice or seek help from a qualified bicycle mechanic at you local dealer.

-Always observe the minimum and maximum values specified – see **Technical specifications**, page 9.

-Only use suitable, undamaged, high-quality tools recommended in this manual – see **Tools required in this manual for assembly**, page 2.

-When conducting assembly steps that require a specific tightening torque, always use an appropriate torque wrench that is designed for the tightening torque specified.

### NOTICE

Never use a high-pressure cleaner or steam cleaner to clean your bicycle, as the seals of your bicycle components are not able to withstand the pressure. If such cleaners are used, it would result in corrosion and material damage.

Never use caustic solvents (such as paint thinners, acetone etc.) as they can attack the surface of your THM fork.

Only use soap and water or isopropyl alcohol to clean your THM forks. When cleaning avoid excessive wiping and prolonged exposure times to these cleaning materials.

Always ensure your bicycle is maintained in a flawless condition. Care and maintenance will prolong the service life of your bicycle and its components and improve your personal safety!

If you suspect that your bicycle is defective or is not functioning properly, stop using it and contact a specialty bicycle retailer immediately!

### **Disposal**

If your THM fork is defective or no longer in use, either return it to THM or you can dispose of it with your non-recyclable waste or domestic refuse provided that you first cut the steer tube completely off.

## Before every ride

### ⚠ WARNING

**There is a risk of accident due to sudden unexpected failure of the fork while riding if any carbon fibers on the fork are damaged during any installation procedure or through use.**

- Check to ensure the quick release is properly attached and tightened per the instruction provided with the wheel.
- Check your headset to make sure it is undamaged and functioning properly before every ride. Do not use your bicycle under any circumstances if your headset exhibits even just a small amount of play, as this can cause the steerer tube of your fork to break suddenly during use.
- Check the stem before every journey to ensure it is seated correctly.
- Check your THM fork before each ride to ensure the bonded joints are completely undamaged (dropouts, bearing surface for lower headset bearing, brake fastening components). Send us your THM fork for inspection before further use if damage is visible (cracks, fractures, clicking sounds, wobbling etc.) or if you are in any doubt about its safety.
- Check your THM forks before each ride to ensure the surfaces are completely undamaged. Send us your THM forks for inspection before further use if damage is visible (deep scratches in the paintwork which extend into the carbon structure, large abrasions etc.) or if you are in any doubt about their safety.
- Do not exceed the maximum overall weight for which your THM fork is been approved – see **Dimensions**, page 9.

## Regular maintenance

The maintenance intervals required for your bicycle depend on how often and in which weather conditions it is used.

The following maintenance measures should be conducted more frequently if the bicycle is used in extreme conditions (rain, dirt, long distances etc.).

When conducting regular maintenance procedures make sure your bicycle is always clean and well lubricated. Ask your specialist dealer about appropriate lubricants and cleaners as well as information relating to their correct application.

### ⚠ WARNING

**There is a risk of accident caused by malfunctioning brakes.**

-After conducting any cleaning, maintenance or repair work make sure that the braking rims of your wheels are free from lubricants (such as grease, oil, silicon, Teflon, wax or other similar agents).



### NOTICE

Never use a high-pressure cleaner or steam cleaner to clean your bicycle, as the seals of your bicycle components are not able to withstand the pressure. If such cleaners are used, it would result in corrosion and material damage.

If you are using a hose, never aim the hose directly at any bearing or the headset of the fork (fig. 1).

- ☞ Clean your THM-fork at regular intervals by using soap and water or isopropyl alcohol.
- ☞ When cleaning your THM fork always check for signs of damage in bright sunlight (dents, cracks, scratches, large abrasions, worn areas etc.).
- ☞ Periodically check the gear and brake cables to ensure they are moving freely.
- ☞ Periodically check all bolts to ensure they are firmly secure; when doing this observe the respective tightening torques.



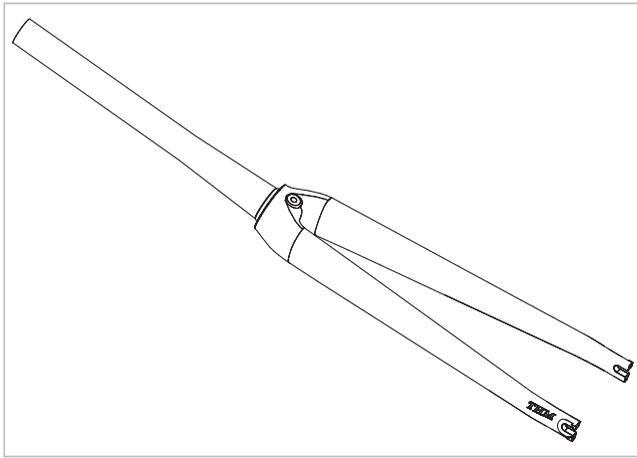
All warranty claims for R5ca fork are administered by Cervélo Customer Service.

Please contact the Cervélo Customer Service **before** returning a defective THM product!  
([www.cervelo.com](http://www.cervelo.com) >>> **company** >>> **contact**)

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