ZHT-5 RETAILER ASSEMBLY MANUAL

cervélo

TABLE OF CONTENTS

Important Information 1
List of Tools & Supplies 2
ZHT-5 Frame Features 3
ZHT-5 Small Parts 4
Frame & Component Preparation 5
Seatpost Assembly 6
Fork Preparation & Installation 7
Brake Hose Routing 9
Mechanical Housing Routing & Installation 11
Dropper Post Cable Routing 13
Rear Aero Thru-Axle Installation 14
Tire/Rim Clearance 15
Intended Use of The ZHT-5 Bicycle 16
ZHT-5 Torque Specifications 17
ZHT-5 Frame Details 19
ZHT-5 Frame Geometry 20
Cervélo Customer Support 21

IMPORTANT INFORMATION

This manual is intended to guide official Cervélo retailers through the assembly and adjustment of the Cervélo ZHT-5. This manual outlines the process and procedures associated with the installation of Cervélo components, as well as the routing of shifting and braking control lines only. Proprietary parts referenced in this manual are available only through Cervélo or its authorized distributors.

Failure to use the specified parts and follow these assembly instructions, may result in loss of control while riding; and lead to serious injury. This manual is not intended to replace the assembly and service instruction provided by third-party component manufactures, and assumes that the assembler is a trained, professional bicycle mechanic. See https://www.probma.org/

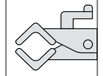
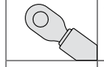
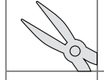
NOTE: Cervélo strongly recommends that all assembly and adjustment procedures be performed by an authorized Cervélo retailer. If you are a Cervélo ZHT-5 consumer/ purchaser reading this manual we suggest that before attempting to undertake any of the procedures in this manual that you consult your authorized Cervélo retailer, or visit us at www.cervelo.com/support

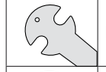
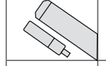
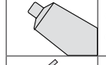
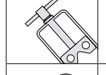
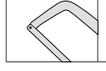
LIST OF TOOLS & SUPPLIES

This manual outlines a number of procedures for making adjustments to the ZHT-5 bicycle. The following tools and parts listed are required for these adjustments. Cervélo strongly recommends that all assembly and adjustment procedures be performed by an authorized Cervélo retailer.

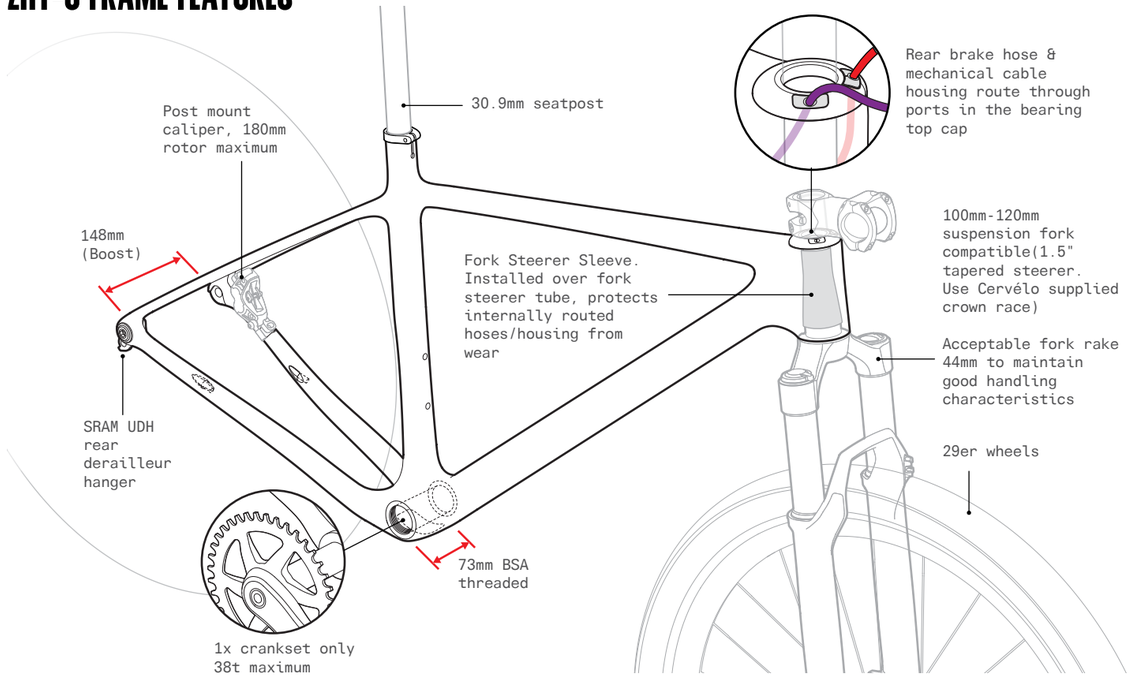
NOTE: All non-proprietary components such as those from Shimano or SRAM are available from your local distributor.

NOTE: This manual was developed to compliment the Cervélo General User Manual, and is intended as a supplement to the assembly and installation instructions supplied by the component manufacturers (provided with this bicycle).

Tools	
	Bicycle workstand (types which secure bike by the seatpost, or pro-type stand with fork mount)
	Torque wrench(es) with 2.5Nm to 15Nm range and adaptors:
	Allen (Hex) head inserts: 2mm, 2.5mm, 3mm, 4mm, 5mm, 6mm, 8mm, 10mm
	Torx head inserts: T25
	Open ended wrenches: 7mm, 8mm, 10mm
	Cable / hydraulic hose cutters
	Pliers
	Philips-head screwdriver

Tools	
	Slot-head screwdriver
	Pedal wrench
	Lockring tools for brake rotors and bottom bracket
	Hydraulic bleed kit
	Isopropyl alcohol
	Star nut & crown race (1.5") installation tools
	Good quality bicycle grease & carbon assembly compound
	Saw cutting guide (ParkTool SG-7.2 or equivalent)
	Hacksaw (with carbon specific blade)

ZHT-5 FRAME FEATURES



ZHT-5 SMALL PARTS

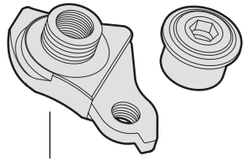
The ZHT-5 frame is engineered to provide seamless integration of mechanical and electronic shifting systems, regardless of brand. In order to do so, you may require the parts shown below:



BB Blanking Plug
GR-BB-140

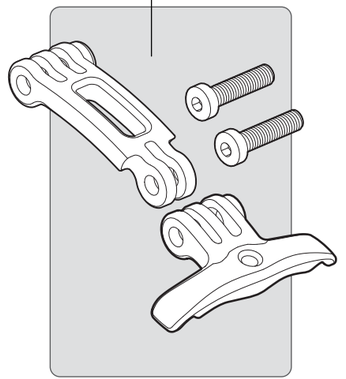


Chainstay Blanking Plug(6mm)
GR-576



SRAM UDH Rear Derailleur Hanger w/Fixing Nut
SRAM p/n 00.7918.089.000

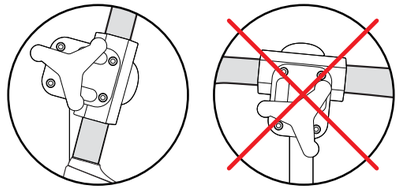
Accessory Mount Kit-Rear
MT-LM-R-003



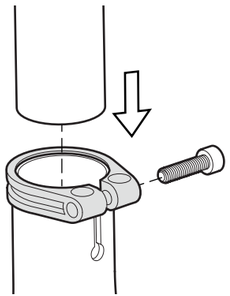
Item Description	Cervélo Part No.
BB Blanking Plug	GR-BB-140
6mm Chainstay Blanking Plug	GR-576
ZHT-5 Chainstay Protector	PRO-CS-558
Cervélo Rear MTB Thru Axle w/ Removable Handle	QRA-MTB-R
Removable Handle for Cervélo AeroThru Axle (MTB)	QRA-MTB-R-HNDL
Accessory Mount-Rear	MT-LM-R-003
ZHT-5 Headset (9mm Bearing Cap, Split Ring and 5 Inserts)	BC-538
SP29 Carbon Post 0mm Offset 30.9mm w/Head	SP-SP29-ZERO
Fork Steerer Sleeve	PRO-HT-19-5

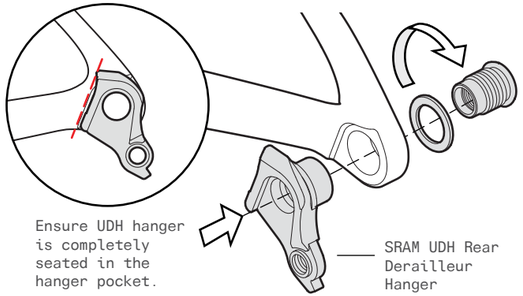
FRAME & COMPONENT PREPARATION

⚠ WARNING
Hold the frame using a secured seatpost only. Clamping the top tube can damage the frame and void your warranty.



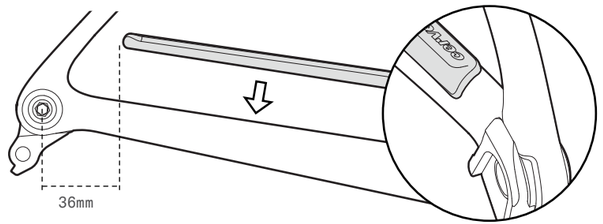
1. With **carbon seatposts**, apply carbon paste to the frame and seatpost to be inserted into the frame. With **alloy seatposts**, apply grease to the frame and seatpost to be inserted into the frame.
2. Insert the seatpost into the frame.
3. Adjust height and torque the Seatpost Clamp to 4Nm maximum.





Install the UDH fixing nut through the washer and into the UDH hanger threads. Do not apply grease to the UDH hanger or fixing nut. Tighten to 25Nm.

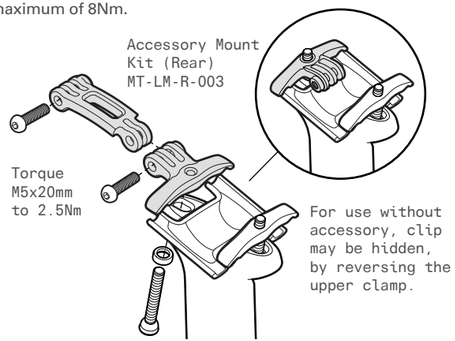
NOTE: The UDH hanger fixing nut is left-hand threaded.

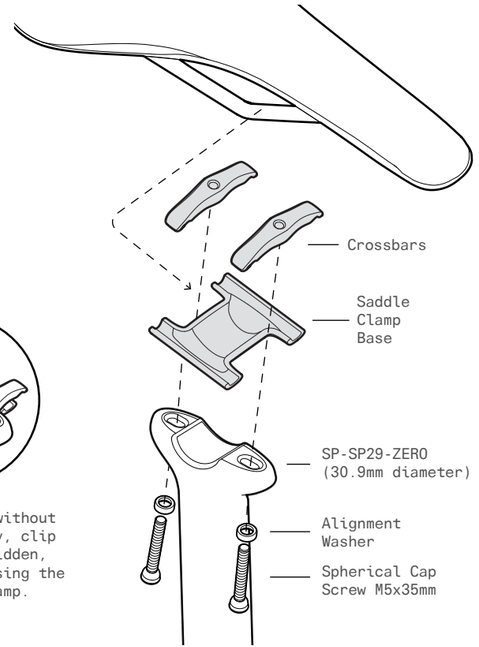


Clean the chainstay using isopropyl alcohol. Install the Chainstay Protector (PRO-CS-508) by removing adhesive backing, and fixing the guard to the frame. The bottom rearward edge should be approximately 36mm forward from the center of the rear dropout.

SEATPOST ASSEMBLY

1. Apply a light coat of carbon assembly compound to the upper face of the Seatpost, making sure to cover area around the adjustment slots.
2. Locate saddle rail between Crossbars and Saddle Clamp Base and place on Seatpost.
3. Ensure Loctite 242 is applied to the threads near the base of the 35mm fixing screws.
4. With alignment washers installed, attach assembly to Seatpost, by tightening lightly greased Spherical Cap Screws, alternating between the two sides each 1/2 turn. Once saddle is adjusted, tighten fixing screws to a maximum of 8Nm.



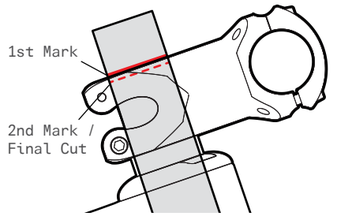


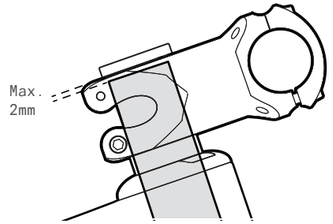
⚠ WARNING
If seatpost trimming is required, final length should allow for a minimum of 70mm of seatpost remaining in the frame, or the minimum insertion dimension indicated on the seatpost, whichever is greater. Failure to meet this requirement may result in damage to the frame not covered by warranty policy, or serious injury to rider.

FORK PREPARATION & INSTALLATION

These illustrations are intended as a supplement to the manufacturer's installation instructions only. Please refer to the component manufacturer's service center or website for further information.

1. Apply grease to the bearing pockets and install the upper and lower headset bearings into the frame.
2. Fit the fork provided with your frame into the head tube with the complete headset, required spacers, and the stem.
3. Apply the minimum pressure needed to ensure the assembly is fully seated. Mark the steerer tube at the top of the stem.
4. Remove fork and clearly mark the fork steerer tube at a point 2mm below the first mark. Take care to verify that this measurement is correct as this defines the cut line for the steerer tube.
5. To trim fork steerer, use a saw suitable for cutting the specific steerer material, and a cutting guide.
6. Install Star Nut 4-15mm below the steerer's top edge.
7. Fit Fork Steerer Sleeve over the steerer and trim to fit between the upper & lower bearings without contacting either part. This will prevent wear of the hoses/cables against the steerer.

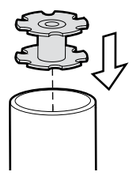


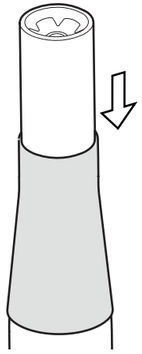


⚠ WARNING
Forks with carbon steerer tubes are not recommended for use with the ZHT-5.

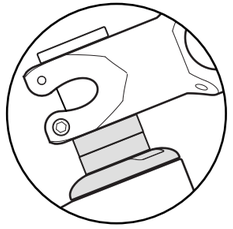
⚠ WARNING
Improper cutting of the steerer tube could cause a failure that may result in severe injury or death.

Install Star Nut 4-15mm into steerer.

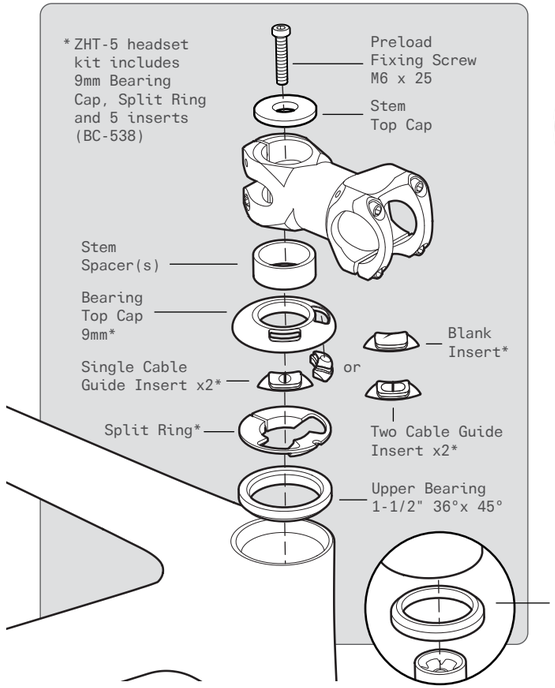


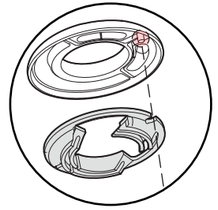


Install Fork Steerer Sleeve (PRO-HT-19-5) in the space between the upper and lower bearings



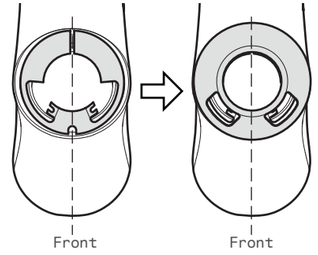
⚠ WARNING
Do not exceed 30mm maximum total spacer height, including the Bearing Top Cap.

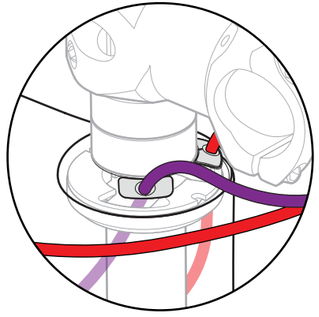




Align split ring with the pin on the Bearing Top Cap

Ensure Split Ring and Bearing Top Cap are aligned with the front of the frame and fork.





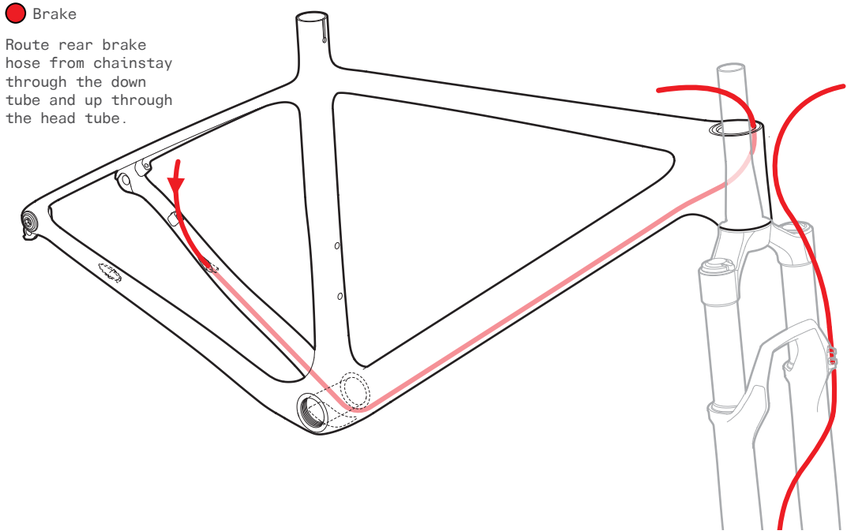
Rear brake hose and shifter /dropper post cable housing routes through the Bearing Top Cap Inserts, Split Ring and upper bearing into the frame.

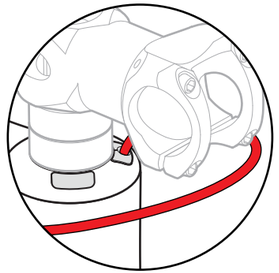
BRAKE HOSE ROUTING

These routing illustrations are intended as a supplement to the manufacturer's installation instructions only. Please refer to the component manufacturer's service center or website for further information.

Brake

Route rear brake hose from chainstay through the down tube and up through the head tube.

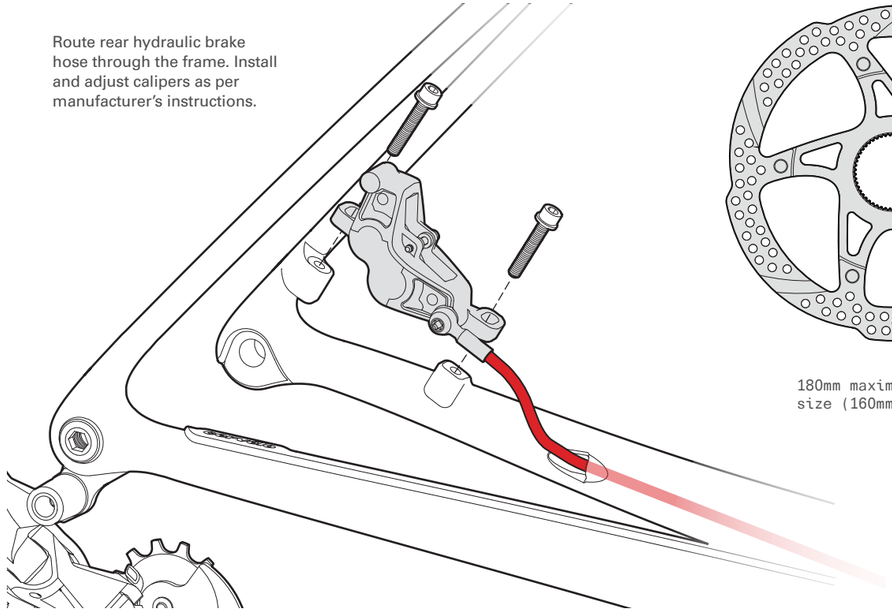


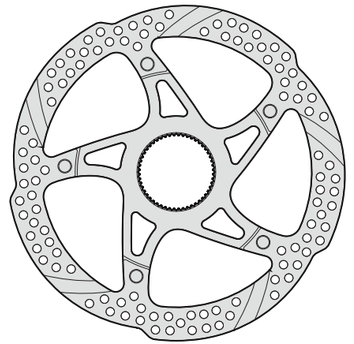


Run rear brake hose through the non-drive side port in the Bearing Top Cap.

Front brake hose runs externally as per suspension fork manufacturer's specifications.

Route rear hydraulic brake hose through the frame. Install and adjust calipers as per manufacturer's instructions.





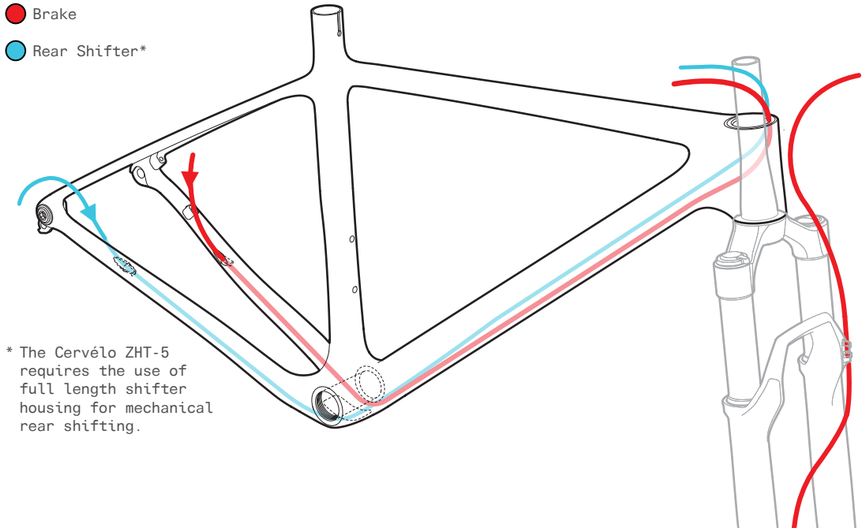
180mm maximum rear rotor size (160mm minimum).

MECHANICAL HOUSING ROUTING & INSTALLATION

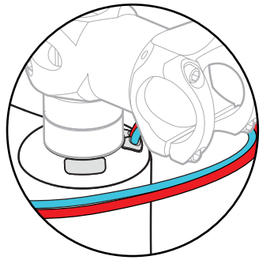
These routing illustrations are intended as a supplement to the manufacturer's installation instructions only. Please refer to the component manufacturer's service center or website for further information.

Brake

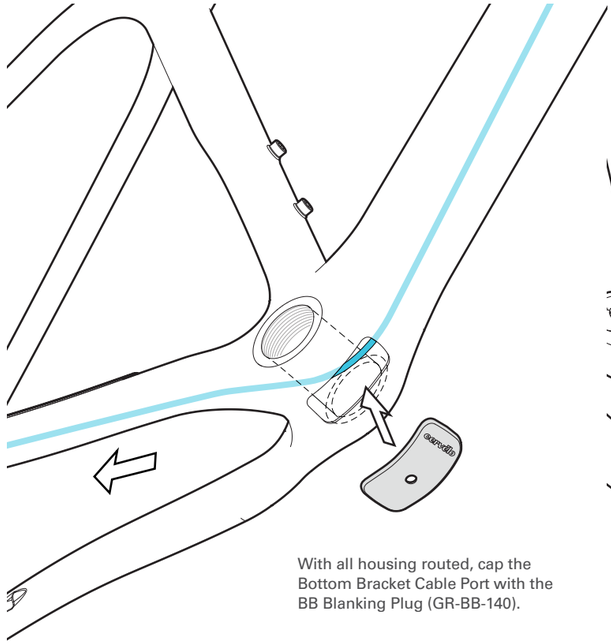
Rear Shifter*



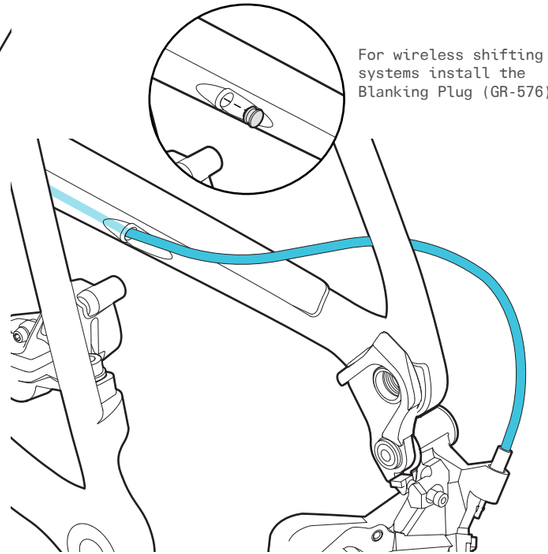
* The Cervélo ZHT-5 requires the use of full length shifter housing for mechanical rear shifting.



Run mechanical shifter housing and the rear brake hose through the non-drive side port in the Bearing Top Cap.



With all housing routed, cap the Bottom Bracket Cable Port with the BB Blanking Plug (GR-BB-140).



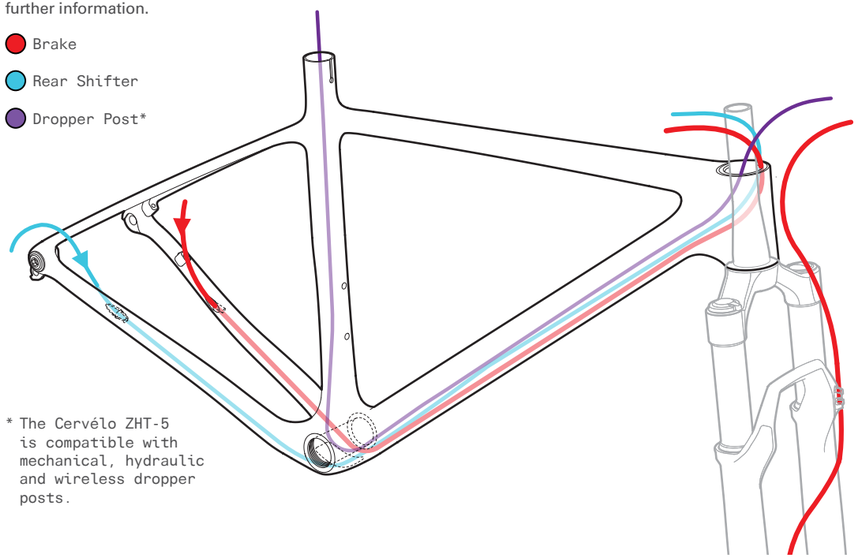
For wireless shifting systems install the Blanking Plug (GR-576).

As per manufacturer's instructions, install rear derailleur on rear derailleur hanger, cut appropriate housing length, and attach cable.

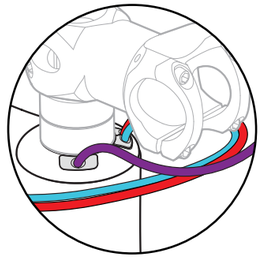
DROPPER POST CABLE ROUTING

These routing illustrations are intended as a supplement to the manufacturer's installation instructions only. Please refer to the component manufacturer's service center or website for further information.

- Brake
- Rear Shifter
- Dropper Post*

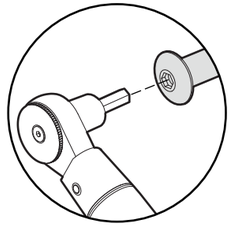


* The Cervélo ZHT-5 is compatible with mechanical, hydraulic and wireless dropper posts.



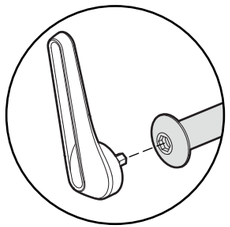
Run mechanical shifter housing and the rear brake hose through the non-drive side port in the Bearing Top Cap. Run dropper post housing through the drive side port.

REAR AERO THRU-AXLE INSTALLATION

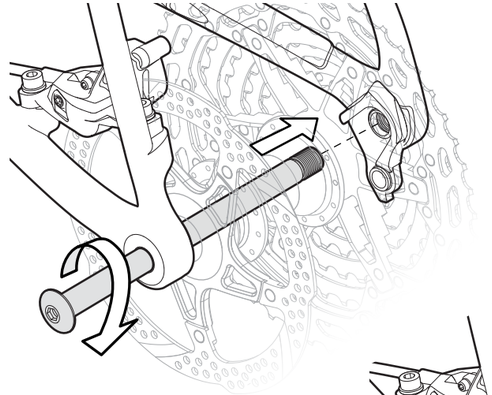


6mm Allen key / torque wrench

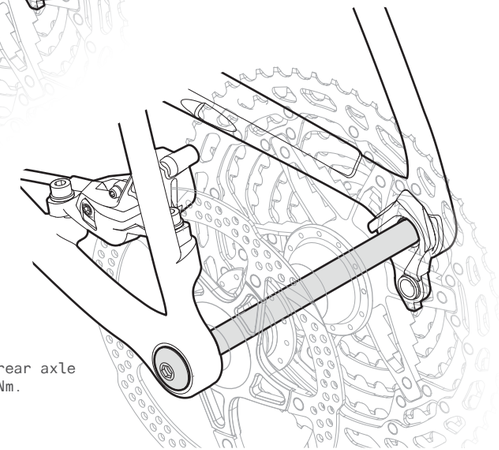
or



Removable Handle for Cervélo Aero Thru Axle (MTB) (QRA-MTB-R-HNDL)



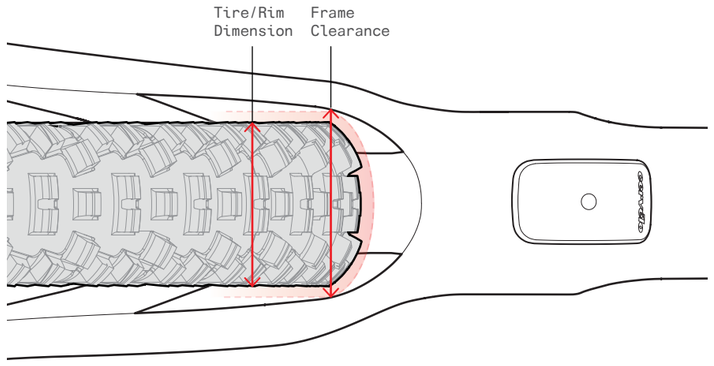
To secure wheels, install the greased axle, through the drop out and the wheel hub, aligning the threaded end of the axle with the threaded insert. Once aligned and engaged, thread the axle (clock-wise) into the threaded component of the insert until the axle is secured tightly.



Tighten rear axle to 12-15Nm.

TIRE/RIM CLEARANCE

Your Cervélo bicycle complies with the ISO 4210-2:4.10.2 standard for tire clearance. In order to comply with these safety standards and maintain your Limited Lifetime Warranty, a minimum of 6mm of clearance must remain between the tire and any frame element. Due to the growing complexity of tire and rim interfaces, Cervélo recommends identifying the available space before choosing a tire.



1. Measure the space between the chainstays at the bottom bracket junction.
2. Measure the space between the seatstays at the top of the tire.
3. Using the smallest of those two numbers, subtract 12mm (6mm per side) to determine the remaining space.
4. With the tire installed and fully inflated on your wheel, measure the widest of the rim or tire width to ensure that it fits.

⚠ WARNING
Contact between the tire or rim and the frame or fork may result in a loss of control while riding and potentially serious injury. Failure to follow these guidelines may result in damage to the frame not covered by Cervélo Limited Lifetime Warranty.

INTENDED USE OF THE ZHT-5 BICYCLE

⚠ WARNING
Understand your bike and its intended use. Choosing the wrong bicycle for your purpose can be hazardous. Using your bike the wrong way is dangerous.

No one type of bicycle is suited for all purposes. Your retailer can help you pick the "right tool for the job" and help you understand its limitations. There are many types of bicycles and many variations within each type. There are many types of mountain, road, racing, hybrid, touring, cyclocross and tandem bicycles. There are also bicycles that mix features. For example, there are road/racing bikes with triple cranks. These bikes have the low gearing of a touring bike, the quick handling of a racing bike, but are not well suited for carrying heavy loads on a tour. For that purpose you want a touring bike.

Within each of type of bicycle, one can optimize for certain purposes. Visit your bicycle shop and find someone with expertise in the area that interests you. Do your own homework. Seemingly small changes such as the choice of tires can improve or diminish the performance of a bicycle for a certain purpose.

NOTE: Usage conditions are generalized and evolving. Consult your retailer or Cervélo Customer Service about how you intend to use your bike.

NOTE: Cervélo bicycles are tested to a maximum combined bicycle/rider/luggage weight of 100kg. Components have different weight limits, and if replaced can alter the maximum safe bike weight limit. Consult your retailer or Cervélo Customer Service about what components are appropriate for your bicycle.

Maximum Weight Limit - Cervélo ZHT-5

Rider	194 lbs	88 kg
Gear*	11 lbs	5 kg
Total	**220.5 lbs**	**100 kg**

*Seat bag / water bottles / bento bag / handlebar bottle / storage mounts only

Cross-County, Marathon, Hardtails - Condition 3

Bikes designed for riding Conditions 1 and 2, plus off road use including rough trails, small obstacles, and smooth technical areas, including areas where momentary loss of tire contact with the ground may occur. Jumps should be no more than 24" (61cm).

Intended For cross-country riding and racing which ranges from mild to aggressive over intermediate terrain (e.g., hilly with small obstacles like roots, rocks, loose surfaces, hard pack and depressions). Cross country and marathon equipment (tires, shocks, frames, drivetrains) are light weight, favoring nimble speed over brute force. Suspension travel is relatively short since the bike is intended to move quickly on the ground and not spend time in the air landing hard and hammering over obstacles.

Not Intended For extreme forms of riding including Freeriding, Downhill, Gravity, Dirt Jumping, or other aggressive riding styles.

Trade-Off Cross-country bikes are lighter, faster to ride uphill, and more nimble than All Mountain bikes. Cross-country and marathon bikes trade off some ruggedness for pedaling efficiency and uphill speed.

ZHT-5 TORQUE SPECIFICATIONS

Correct tightening torque of threaded fasteners is crucial to your safety. Always tighten fasteners to the correct torque. In case of a conflict between the instructions in this manual and those provided by a component manufacturer, consult with your retailer or with Cervélo Customer Service for clarification. Fasteners that are too tight can stretch and deform. Fasteners that are too loose can move and fatigue. Either mistake can lead to a sudden failure of the fastener.

Use only a correctly calibrated torque wrench to tighten critical fasteners on your bike. Carefully follow the torque wrench manufacturer's instructions on how to set and use the tool for accurate results. Ensure you read all relevant documentation and have the correct tools prior to attempting any adjustments yourself.

It is recommended that you permit your retailer to perform the following adjustments, as they have the proper tools and experience to ensure it is done correctly.

Prior to assembling and tightening any bolts, all threads must be generously greased with a quality, non-lithium type grease unless the bolt is pre-coated with Loctite® thread locker. All bolts should have either grease or Loctite - but never both. Torque wrenches with scale appropriate for the particular torque setting are strongly recommended for tightening all threaded fasteners.

Cervélo strongly recommends the use of carbon assembly compound/friction paste for all areas of clamping to carbon fiber, such as the seatpost to frame, the stem to fork, and the handlebar to stem joints. Benefits to using this paste include reduced corrosion potential, and a decrease in required clamping force needed to support a given load. The paste should be evenly spread on the carbon surface under the clamped area, and the applicable bolt tightened as per the following recommendations.

WARNING: In case of a disagreement or a conflict between the following list and any supplier literature on recommended torque values for original equipment components, please contact Cervélo Customer Support for review and clarification of the required torque prior to installation.

Component	Torque(Nm)	Notes
Frame		
Bottom Bracket- threaded- BSA 73	50 Nm	Clean & grease the BB shell threads inside the frame. Grease the outside threads of the BB cups. Thread both sides of the BB cups into the frame- noting that the right side cup is reverse threaded. Using a torque wrench and the appropriate adaptor, tighten both sides to the specified torque until they are flush with the frame.
Rear derailleur fixing nut (SRAM UDH)	25 Nm	Apply grease only to the thru axle threads. Do not apply grease the UDH hanger or fixing nut.
Water bottle cage fixing screws	2 to 3 Nm	Lightly grease the fixing screws.
Seatpost Clamp (frame to seatpost)		
Round collar	4 Nm	Use carbon assembly compound between a carbon seatpost and the frame.
Saddle (seatpost head bolts) – SP29 Carbon		
2 bolt head	8 to 9 Nm	Ensure Loctite 242 is used on both bolts (1 is pre-applied).
Wheels		
Cervélo aero thru-axle / Cervélo aero thru-axle with removable handle	12 to 15 Nm	Requires the use of a 6mm allen key type wrench or removable handle.

ZHT-5 FRAME DETAILS

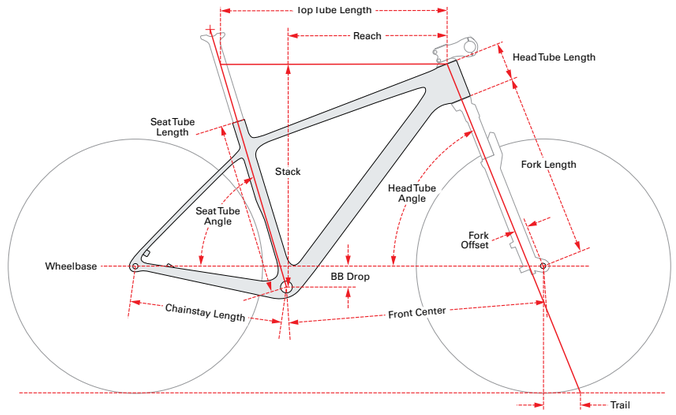
ZHT-5 (FM150)	
Bike Name	ZHT-5
Model Year	2023
Serial Number Code	SN150
Frame Code	FM150
Brake Mount Type (Rear)	Post Mount
Frame Sizes	S/M/L/XL
Wheel Size	29"
BB Type	BSA 73mm
Headset Type	Integrated 1-1/2" X 1-1/2"

ZHT-5 (FM150)	
Upper Headset Bearing Dimensions	1-1/2", 40 x 51.8 x 7.5, 36°x45°
Lower Headset Bearing Dimensions	1-1/2", 40 x 51.8 x 7.5, 36°x45°
Seatpost	30.9mm Round
Seatpost Clamp Diameter	35.5mm
Rear Derailleur Hanger	SRAM UDH
Rear Thru-Axle Dimensions	12 x 148MM (Boost)
Maximum Chainring Size (1x)	38t
Maximum Tire Width (Actual)	61mm (2.4") with 6mm clearance*

* Tire measurements shall be taken at the widest point of the tire when it is installed on the rim and inflated. 6mm of distance is required between the tire and any frame or fork element.

ZHT-5 FRAME GEOMETRY

ZHT-5 (FM150)	S	M	L	XL
Reach	409mm	433mm	457mm	484mm
Stack	606mm	612mm	623mm	636mm
Bottom Bracket Drop	62mm	62mm	62mm	62mm
Chainstay Length	430mm	430mm	430mm	430mm
Seat Tube Angle	74°	74°	74°	74°
Head Tube Angle	69°	69°	69°	69°
Fork Length (Axle to Crown)	511mm	511mm	511mm	511mm
Fork Offset	44mm	44mm	44mm	44mm
Front Center	667mm	693mm	722mm	754mm
Head Tube Length	89mm	95mm	107mm	121mm
Wheelbase	1090mm	1116mm	1145mm	1177mm
Standover Height	705mm	740mm	782mm	810mm
Seat Tube Length	377mm	433mm	485mm	519mm
Top Tube Length	582mm	608mm	635mm	666mm



The figures shown in this chart are calculated using a Rock Shox suspension fork with 100mm travel, 44mm offset, and an overall length of 511mm (axle to crown).

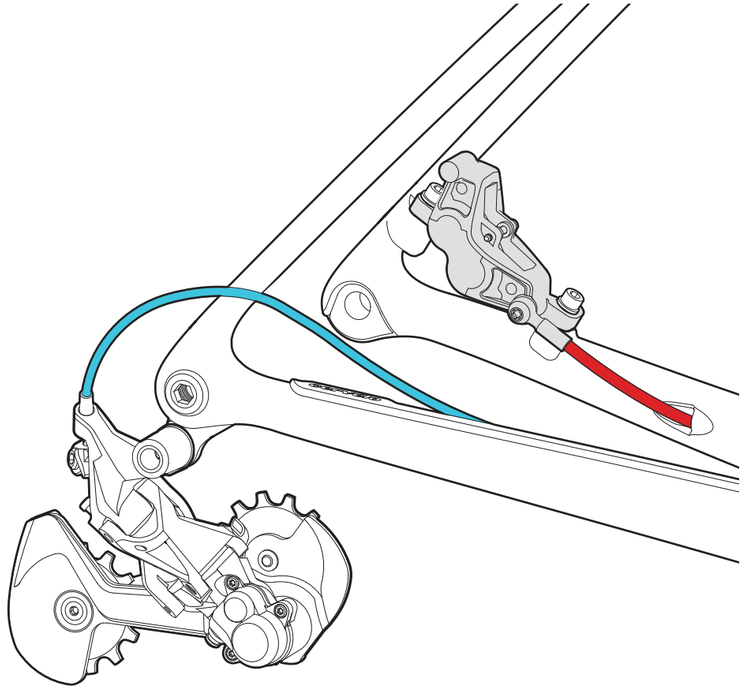
CERVÉLO CUSTOMER SUPPORT

Contacting Customer Support
Visit www.cervelo.com/contact-us to submit a question to Cervélo.

Product Registration
Visit www.cervelo.com/support to register your Cervélo bicycle through your MyCervélo account.

Manuals
Visit www.cervelo.com/product-manuals for additional information on Cervélo products.

Warranty
Visit www.cervelo.com/warranty for information on Cervélo's warranty policy.



NOTES

ZHT-5 RETAILER ASSEMBLY MANUAL

CER-HTA-V1 2022-04-24

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