R5-CX RETAILER ASSEMBLY MANUAL





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LIST OF TOOLS & SUPPLIES

This manual outlines a number of procedures for making adjustments to the R5-CX 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).



IMPORTANT INFORMATION

This manual is intended to guide official Cervélo retailers through the assembly and adjustment of the Cervélo R5-CX. This manual outlines the process and procedure 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 Cycles Inc.

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 R5-CX 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

Tools	Tools		
le workstand (types which e bike by the seatpost, or ype stand with fork mount)	Pedal wrench		
e wrench(es) with 2.5Nm to a range and adaptors:	Lockring tools for brake rotors and bottom bracket		
(Hex) head inserts: . 2.5mm, 3mm, 4mm, 5mm, . 8mm, 10mm	Hydraulic bleed kit		
ended wrenches: 8mm, 10mm, 17mm	Isopropyl alcohol		
cutters	Di2 wire tool – Shimano		
	Good quality bicycle grease & carbon assembly compound		
os-head screwdriver	Saw cutting guide (ParkTool SG-7.2 or equivalent)		
lead screwdriver	Hacksaw (with carbon and aluminum specific blades)		

R5-CX PARTS LIST

R5-CX FRAME FEATURES

Cervélo Part No.

STC-305

BC-ST32

FKI-CL005-517A

MT-LM-F-004

MT-LM-R-003

Item Description	Cervélo Part No.
BB Blanking Plug	GR-BB-140
Rear Derailleur Hanger w/Fixing Nut	DRH-WMN112
Shimano Direct Mount RDH w/Fixing Nut	DRH-SDM
Threaded Fork Insert w/Fixing Screw	QRI-THD
SeatTube Blanking Plug(1x & Wireless)	GR-576
Brake Hose Guide	CBG-DBH
Front Derailleur Mount w/ Fixing Screws	FDM-590
Front Derailleur Mount Blanking Plate (1x)	FDM-CVR
Dropout Blanking Plug Wireless	GR-DRPOUT-CLOSED

	Item Description	Cervélo Part No.		Item Description	Cervélo	
	Dropout Electric Wire Guide	GR-DROPOUT-GUIDE		Rubber Plug for ST32 Top Cap	PL-338	
	SP24 Seatpost w/ Head 0mm	SP-SP24-ZERO		ST31/32 Top Cap	STC-305	
	SP24 Seatpost w/ Head 15mm	SP-SP24-15MM		ST32 Bearing Cap Kit	BC-ST32	
	SP18 Seatpost w/ Head 25mm	SP-SP18-25MM			014 000	
	Seatpost Battery Mount	MT-BINT-SP2	ST31/32 HS Spacer Kit		5K-032	
	D-Shaped Seatpost Clamp & Secondary	SPC-256	Split Ring 312		SR-312	
	Cervélo Front Aero	QRA-AERO2-F		D-Shaped Compression Plug	FKI-CL00	
	I hru-Axle Cervélo Rear Aero		ST31/32 Accessory Mount Assembly		MT-LM-F	
	Thru-Axle	UNA-AENU2-N		Accessory Mount	NATINA	
	Cervélo Aero Thru- Axle Removable Handle	QRA-AERO2-HNDL		Kit- Rear	IVI I-LIVI-r	
ED	Chainstay Protector	PRO-CS-508				



Brake hoses and electric shift wires are internally routed through the frame/ fork and out of the stem.

The R5-CX frame is designed solely for electric shift groups.

SMALL PARTS

The R5-CX frame is engineered to provide seamless integration of electronic shifting systems, regardless of brand. In order to do so, you may require the parts shown below:



Derailleur Hanger Fixing

Nut

Direct Mount

Derailleur

Seatpost Accessory Mount Battery Mount Kit (Rear) MT-BINT-SP2 MT-LM-R-003 ALL ALLAND MANAN



See pages 12 and 19 for mounting instructions.

ST31 STEM



 Coat the surfaces where the stem body and faceplate contact the handlebar clamping area (as shown right) with carbon assembly paste.

- Center the handlebar against the stem body and secure it in place by mounting the faceplate and tightening all faceplate fixing screws finger-tight.
- 3. Tighten the faceplate fixing screws evenly following a star pattern until the upper and lower stem to faceplate gaps are even.
- 4. Perform final tightening in a star pattern using a torque wrench to 6Nm maximum.



Ensure upper and lower faceplate gaps are even.





- 1. Slide Secondary Seatpost Clamp onto seatpost.
- Apply carbon paste to the frame and seatpost shaft to be inserted into the frame.
- Insert the seatpost into the frame. Adjust height and torque the Seatpost Clamp to 6Nm maximum.
- 4. Torque the Secondary Seatpost Clamp to 3Nm maximum.

A WARNING

If trimming of the seatpost 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.

FRAME & COMPONENT PREPARATION

(**0**),

Install Front Derailleur Mount (FDM-590), and ensure fixing screws are torqued to 3Nm.

 For 1x systems replace with the Front Derailleur Mount Blanking Plate (FDM-CVR).



Lightly grease Rear Derailleur Hanger Fixing Nut and install either Rear Derailleur Hanger (DRH-WMN112) or Direct Mount Rear Derailleur Hanger (DRH-SDM) finger tight. Final tightening will be performed after rear wheel installation.

WARNING
 Do not final tighten rear derailleur
 hanger assembly without rear wheel
 installed. Doing so may result in a
 misaligned derailleur and poor shifting.



- Lightly grease supplied M4 fixing screw. Install the Threaded Fork Insert (QRI-THD) and fixing screw, tightening only lightly.
- Without wheel in place, install the axle and tighten until the flange meets the fork dropout face, but does not compress the fork blades.
- 3. Tighten the fixing screw to 3Nm.
- 4. Remove the axle and install wheel. Reinstall axle and tighten to 12-15Nm.
- 5. Remove axle and wheel, and re-torque the fixing screw to 3Nm.



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 50mm forward from the back of the rear dropout.



To install Accessory Mount -Rear (MT-LM-R-003), replace the rear upper crossbar of the seatpost with the kit version. Tighten to maximum 8Nm. See also page 19. For use without accessory, clip may be hidden, by reversing the crossbar.



FORK PREPARATION & INSTALLATION

- 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 4mm 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 only a saw suitable for cutting carbon, and a cutting guide.
- 6. Insert D-Shaped Compression Plug and tighten to hold in place. Do not apply final torque until after the stem is installed.
- Place Lower Bearing over the fork steerer and insert into the frame from the bottom of the head tube.
- 8. Lightly coat the fork steerer at the stem clamping interface with carbon assembly compound. Install over the steerer in order: Upper Bearing, Split Ring, Bearing Top Cap, Stem Spacers, and Stem. Do not install the Stem Top Cap.

- 9. Tighten the Compression Plug to 8Nm using a toraue wrench.
- 10. Install the Stem Top Cap and Preload Fixing Screw into the stem. Tighten the Preload bolt only enough to remove all play from the headset, and ensure the bearings rotate freely (typically 1 to 2 Nm)
- 11. Tighten the stem to fork fixing bolts to 5Nm maximum.

WARNING Avoid breathing the dust created during cutting carbon composite materials.

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

Do not exceed 52mm maximum total spacer height, including the Bearing Top Cap.



The component parts of the compression plug are side-specific. Re-assembling parts incorrectly may result in loss of preload in the system. Refer to the images shown for correct assembly.



Install D-Shaped Compression Plug (FKI-CL005-517A) in fork steerer and lightly tighten. Apply rated torque of 8Nm following stem and spacer installation.



WARNING

Do not torque Compression Plug past the recommended 8Nm maximum. If the **Compression Plug requires tightening past** 8Nm, please contact Cervélo Customer Service.

Upper Bearing



Two-piece Stem Spacers allow for installation or removal without re-cabling

Your Cervélo frame & fork have been designed to work together. Do not substitute a different size fork without first consulting Cervélo **Customer Service to** confirm compatibility with your frame.

BRAKE HOSE ROUTING

These routing illustrations are intended as a supplement to the manufacturer's installation instructions only. For both hydraulic and mechanical disc brakes, please refer to the component manufacturer's service center or website for further information.



Route rear

brake hose

around drive

side of fork

It is recommended to include 20mm-25mm of additional brake hose length to the amount required for the final customer fit. Doing so will permit sufficient length for disassembly and service purposes.

- 1. Measure customer fit
- 2. Add additional 20-25mm of spacers
- 3. Cut and install brake hoses
- 4. Remove extra spacers
- 5. Complete assembly



Route hydraulic brake hose through the frame and fork with the Disc Hose Guide (CBG-DBH). Install and adjust calipers as per manufacturer's instructions.





ELECTRIC WIRE 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
E-Wire(SD300)





SEATPOST ASSEMBLY & INSTALLATION

- 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. With alignment washers installed, attach assembly to Seatpost, by tightening lightly greased fixing screws, alternating between the two sides each 1/2 turn. Once saddle is adjusted, tighten fixing screws to a maximum of 8Nm.

Accessory Mount Kit-Rear MT-LM-R-003 Torque fixing screws to 2.5Nm. Replace rear upper clamp with Accessory Mount kit version. Tighten to maximum 8Nm.



DI2 BATTERY INSTALLATION

The battery for your Shimano Di2 system mounts inside the seat tube using the Seatpost Internal Battery Mount (MT-BINT-SP2). As this is an enclosed location, it is important to test the system prior to final installation.



AERO THRU-AXLE INSTALLATION



Cervélo Aero Thru-Axle with Removable Handle (QRA-AERO2-F, QRA-AERO2-R & QRA-AERO2-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.

A WARNING

To ensure rider safety, it is critical to install the Cervélo Aero Thru-Axle correctly. Failure to do so may result in an accident with potential for serious injury to the rider.







Perform final tightening on Rear Derailleur Hanger Nut using a 17mm wrench. Torque to 12-15Nm. This action is unique to initial assembly, and should not require additional adjustment.

WARNING
 Adjust brakes as per manufacturer's
 instructions.

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 4mm 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 8mm (4mm 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.

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 R5-CX 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 guick 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 vour 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 R5-CX

Cyclocross Riding - Condition 2

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

Bikes designed for riding Condition 1, plus unpaved and gravel roads and trails with moderate grades. Contact with irregular terrain and loss of tire contact with the ground may occur. Drops should be no more than 6" (15cm).

Intended For cyclocross riding, training and racing. Cyclocross involves riding on a variety of terrain and surfaces including dirt or mud surfaces. Cyclocross bikes also work well for all weather rough road riding and commutina.

Not Intended For off road or mountain bike use, or jumping, Cyclocross riders and racers dismount before reaching an obstacle, carry their bike over the obstacle, and then remount. Cyclocross bikes are not intended for mountain bike use. The relatively large road bike size wheels are faster than smaller mountain bike wheels, but not as strong.

R5-CX 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 -T47	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 (disc brake)	12 to 15 Nm	Finger tight prior to rear wheel installation, final torque to approximate torque using open ended wrench.
Removable FDM / FDM blanking plate	3 Nm	Lightly grease the fixing screws.
Water bottle cage fixing screws	2 to 3 Nm	Lightly grease the fixing screws.

R5-CX TORQUE SPECIFICATIONS

Component	Torque(Nm)	Notes
Fork		
Fork steerer compression plug	8 Nm	Lightly grease the fixing
Fork dropout insert	3 Nm	Lightly grease screw, in: meets the fork dropout- to recommended torque
Stem		
Stem to fork steerer tube	5 Nm	Lightly coat the fork stee screws evenly & alterna
Stem to carbon handlebar	6 Nm	Coat the stem/handleba pattern to recommende
Handlebar		
Brake/shift levers (to handlebar)	6 to 8 Nm	Refer to manufacturer's
Accessory mount- front	2 Nm	Lightly grease the fixing
Seatpost Clamp (frame to seatpost)	1	
D-shape collar	6 Nm	Use carbon assembly co
Secondary D-shape collar	3 Nm	
Saddle (seatpost head bolts) – SP24 D-shap	e carbon	
2 bolt head	8 to 9 Nm	Ensure Loctite 242 is us
Wheels		
Cervélo aero thru-axle / Cervélo aero thru- axle with removable handle	12 to 15 Nm	Requires the use of a 6n
Other		
Pedals	30 to 35 Nm	Refer to manufacturer's

screw and tighten to the recommended torque.

stall finger tight on NDS fork dropout. Install the axle (no wheel), and tighten until the axle flange then tighten the fixing screw to recommended torque. Remove the axle, install the axle & wheel e, then remove. Re-torque the fixing screw to recommended torque

erer at the stem clamping interface with carbon assembly compound. Tighten the stem fixing ttely to the recommended torque using a torque wrench.

ar clamping surfaces with carbon assembly compound. Tighten the faceplate fixing screws in a start ad maximum torque using a torque wrench.

instructions for installation of brake/shift levers.

g screws.

ompound between the seatpost and the frame.

ed on both bolts (1 is pre-applied).

nm allen key type wrench or Removable handle.

instructions.

R5-CX FRAME DETAILS

R5-CX (FM153)	
Bike Name	R5-CX
Model Year	2023
Serial Number Code	SN153
Frame Code	FM153
Fork Code	FK153
Brake Mount Type	Flat Mount Disc
Chainstay Height (Flat Mount)	25MM
Frame Sizes	51/54/56/58
Wheel Size	700C
ВВ Туре	T47 BBRight (Threaded)
Headset Type	Integrated 1-1/4" x 1-1/2"

* Tire measurements shall be taken at the widest point of the tire when it is installed on the rim and inflated. 4mm of distance is required between the tire and any frame or fork element.

NOTE: For UCI sanctioned cyclocross races, the maximum tire width is 33mm.

R5-CX (FM153)	
Upper Headset Bearing Dimensions	1-1/4", 34x46.8x7, 45°x45°
Lower Headset Bearing Dimensions	1-1/2", 40x51.8x7.5, 36°x45°
Seatpost	SP-SP24-ZERO, SP-SP24-15MM
Seatpost Clamp	SPC-256
Rear Derailleur Hanger	DRH-WMN112
Rear Derailleur Hanger (Shimano DM)	DRH-SDM
Front Derailleur Hanger	FDM-590
Front Thru-Axle Dimensions	12 x 100MM
Rear Thru-Axle Dimensions	12 x 142MM
Fork Dropout Insert	QRI-THD
Maximum Tire Width (Actual)	43mm with 5mm clearance*

R5-CX FRAME GEOMETRY

R5-CX (FM153)	51cm	54cm	56cm	58cm
Reach	371mm	380mm	389mm	398mm
Stack	520mm	540mm	560mm	580mm
Bottom Bracket Drop	63mm	63mm	63mm	63mm
Chainstay Length	425mm	425mm	425mm	425mm
Seat Tube Angle	74.5°	74°	73.5°	73°
Head Tube Angle	71.5°	71.5°	71.5°	72°
Fork Length (Axle to Crown)	401mm	401mm	401mm	401mm
Fork Offset	51mm	51mm	51mm	48mm
Front Center	581mm	597mm	612mm	620mm
Head Tube Length	97mm	118mm	139mm	157mm
Wheelbase	998mm	1014mm	1029mm	1037mm
Standover Height	758mm	778mm	797mm	817mm
Seat Tube Length	495mm	517mm	538mm	560mm
Top Tube Length	517mm	536mm	556mm	574mm

Wheelbase -



CERVÉLO CUSTOMER SUPPORT

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

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

Manuals

Visit <u>www.cervelo.com/product-manuals</u> for additional information on Cervélo products.

Warranty

Visit <u>www.cervelo.com/warranty</u> for information on Cervélo's warranty policy.

NOTES



CER-CXA-V1 2022-05-25

www.cervelo.com

