



FACTORBIKES.COM

2023 O2 VAM MANUAL



INTRODUCTION

Congratulations on the purchase of your FACTOR product. Please review thoroughly the following instructions and only follow them for correct operation and use. Should you fail to follow the following instructions and warnings, this could result in damage of the product, damage to the bicycle and in severe situations cause possible injury and or death.

Since specific tools and bicycle service experience is required for proper assembly

LIMITED LIFETIME WARRANTY ON BICYCLES AND FRAMESETS

Subject to the following limitations, terms and conditions, Factor warrants to the original owner for the lifetime of the original owner of each new Factor bicycle or frameset that the bicycle frame or frameset is free of defective materials and workmanship.

The lifetime limited warranty is conditioned upon the bicycle being operated under normal conditions and use, and properly maintained in accordance with the owner's handbook (as supplied with the Factor bicycle).

This lifetime limited warranty does not apply to paint/finish, any Factor components considered subject to normal wear and tear or any third-party components attached to the bicycle or frameset, such as wheels, drive train, brakes, or any suspension related parts or components.

Any Factor components considered subject to normal wear and tear are covered under a limited one (1) year warranty. The duration of this limited warranty shall be one (1) year, commencing from the date the customer takes possession of the bicycle.

Factor components considered subject to normal wear and tear will be listed in the Technical Supplement and/or User Manual provided with the bicycle. Any and all third party components included with or installed on Factor bicycles are subject to any manufacturers' guarantee applicable to those components, as specified by the manufacturer.

Additional Conditions: This lifetime limited warranty is made solely to the original owner of this new Factor bicycle or frameset, and shall remain in force only as long as the original owner

installation, it is recommended that the product be assembled by a qualified bicycle mechanic. FACTOR BIKES assumes no responsibility for damages or injury due to improper assembly and installation of the product(s).

To qualify for FACTOR'S LIMITED LIFETIME WARRANTY please visit www.factorbikes.com and register your product(s) within 15-days of purchase.

retains ownership of the Factor bicycle. This lifetime limited warranty is not transferable.

If the bicycle is purchased as a gift, the original recipient of the gift is considered to be the original owner for the purposes of this lifetime limited warranty.

In order to exercise your rights under this lifetime limited warranty, the bicycle or frameset must be presented to Factor or an authorized Factor dealer, together with a receipt, bill of sale, or other appropriate written proof of purchase which identifies the bicycle or frameset by serial number.

Exclusions & Limitations:

The above warranty, or any implied warranty, does not cover:

Modifications from the original condition except such modifications which are necessary to comply with specific national legislative requirements that may apply in the country of use.

Normal wear and tear.

Use of the bicycle for abnormal and/or commercial activities, or for purposes other than those for which the bicycle was designed. Damage caused by failure to follow the instruction manual.

Paint finish and decal damage resulting from normal wear and tear, taking part in competition,

jumping, downhill and/or training for any such events or as a result of exposing the bicycle to, or riding the bicycle in, severe conditions or climates.

Labour and/or transport charges for full or part replacement, repair, return or changeover.

Accident, neglect, improper handling, abuse or wilful damage, misuse, improper assembly and use of devices or components not originally intended for, or not compatible with the bicycle.

Any alteration or repair by you or a third party who is not one of our authorised repairers.

Any specification provided by you. Remedy: Unless otherwise provided, the sole remedy under the above Factor warranty, or any implied warranty, is limited to repair or replacement of defective parts with those of equal or greater value at the sole discretion of Factor.

Except for this remedy Factor will not be responsible for any direct, incidental or consequential loss or damages, including, without limitation, loss or damages for personal injury, property damage or economic losses, whether based on contract, warranty, negligence, product liability or any other theory.

Nothing in this limited warranty will exclude or limit Factor's liability for death or personal injury caused by Factor's negligence or any other liability which cannot be excluded or limited by law. Unless you are a consumer, Factor makes no other warranties, express or implied and all implied warranties, including warranties of merchantability, reasonable care, and fitness for a particular purpose are hereby disclaimed.

Miscellaneous:

In the event that Factor prevails in any court action, you agree to reimburse Factor for the expenses, including attorney's fees and expenses of litigation incurred by Factor in defending against your claim.

Claims made outside the country of purchase may be subject to additional fees and restrictions.

Warranty detail and duration may differ by country. This warranty gives you specific legal rights, and you may also have other rights which may vary from place to place. This warranty does not affect your statutory rights.

To the extent that this warranty statement is inconsistent with local law, this warranty shall be deemed modified to be consistent with such law; under such law, certain disclaimers and limitations may apply to the customer.

Some states and countries do not allow the exclusion or limitation of incidental or consequential damages or warranties, so the above limitations or exclusions may not apply to you.

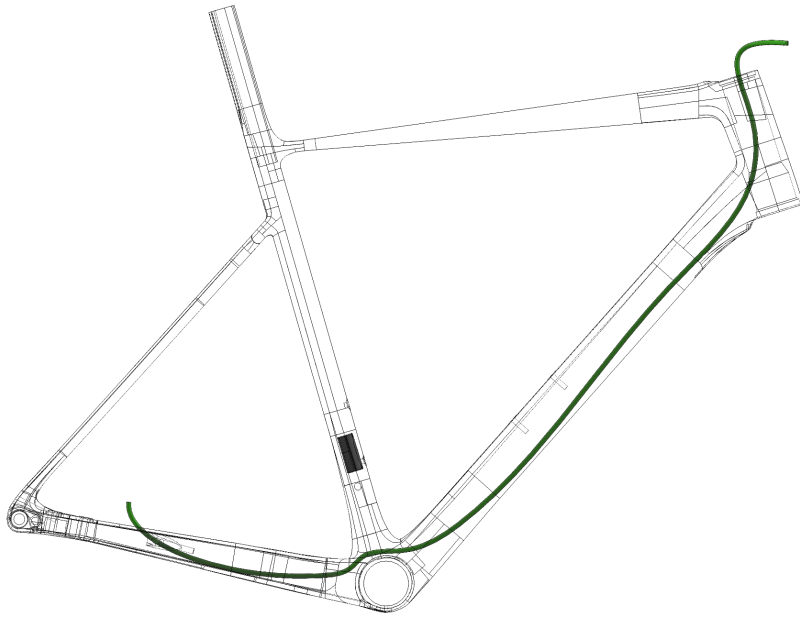
If it is determined by a court of competent jurisdiction that a certain provision of this limited warranty does not apply, such determination shall not affect any other provision of this limited warranty, and all other provisions shall remain in effect.

The English language version of this limited warranty will prevail.

This limited warranty is governed by the laws of European Union and United States and the courts of European Union and United States shall have the non-exclusive jurisdiction to settle any dispute or claim arising out of or in connection to this limited warranty or its subject matter or formation (including non-contractual disputes or claims).

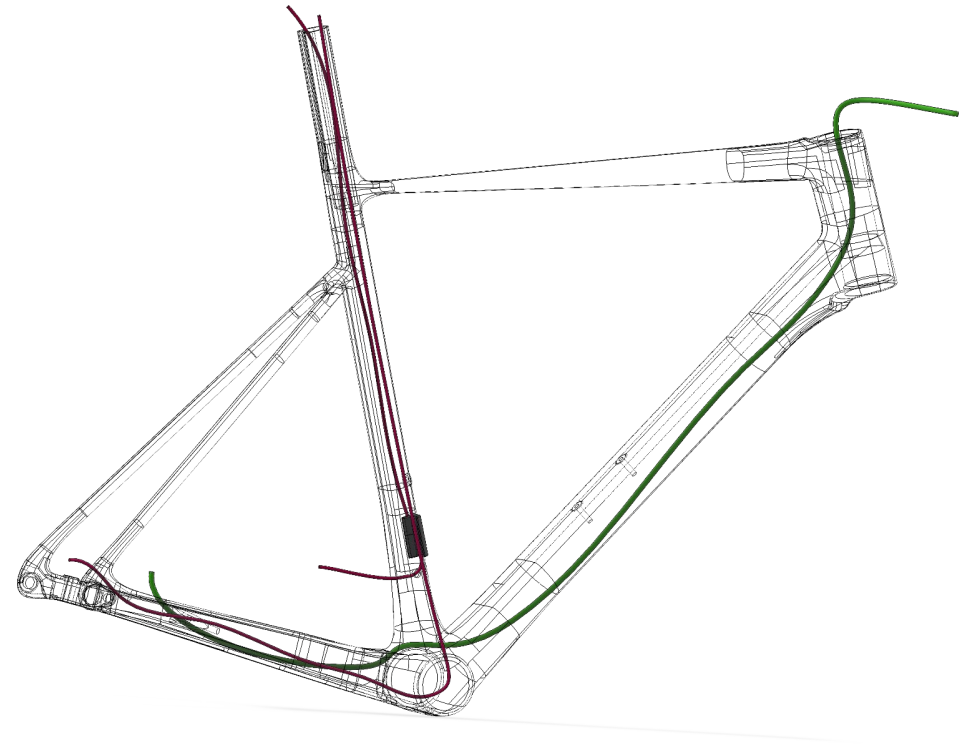
Hose routing

- Install rear brake and fish hose through the frame and out the head tube
- install the anti rattle rear brake hose foam sleeve
- Insure that the clear plastic anti wear guard portion of the anti rattle hose covering is adjacent to the head tube to shield the brake hose from the steerer rotation



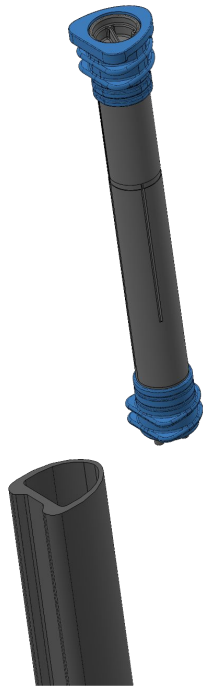
Di2 routing

- Install the Front and rear derailleur Di2 wires as needed, extending from the seat tube for attachment to the BT DN300 battery



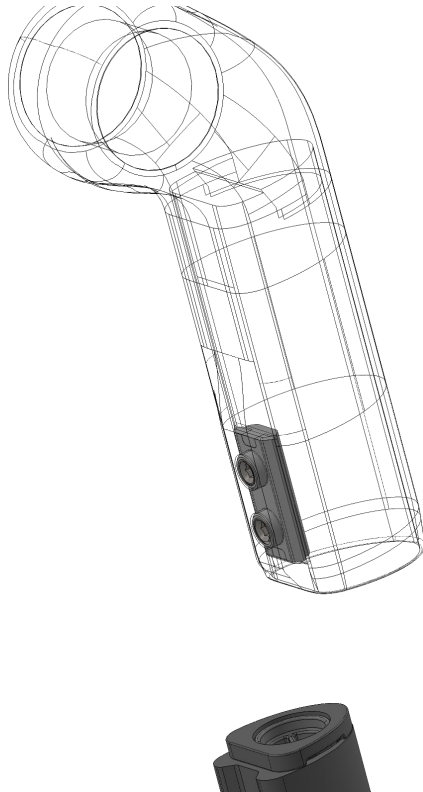
Di2 Battery installation

- Affix the top and bottom rubber mounts to the Di2 battery
- Attach the routed Di2 wires to the battery
- Push the battery into the external seat tube



External SeatPost clamp

- After determining the appropriate external seat post length and offset by working with your shop or customer service rep apply carbon paste to inside surfaces of the external post as well as the seatpost clamp shown below.
- Install the seatpost pusher clamp into the external post, holding it in place with the carbon paste

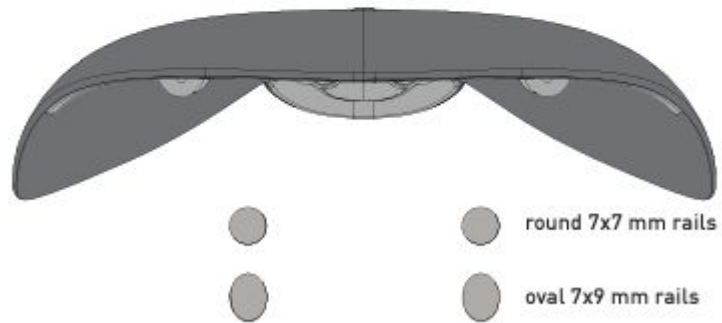


- mount the external post on the frame. Tighten the M3 grub screws to not more than 4 Nm. Be sure to gradually increase the torque on the top and bottom grub screw, alternating between them to ensure an even application of clamping force. Failure to do this can potentially damage the frame.



Seat attachment

- Determine the type of SP rails on your saddle and chose the appropriate clamp setup from the Pizza Box of parts



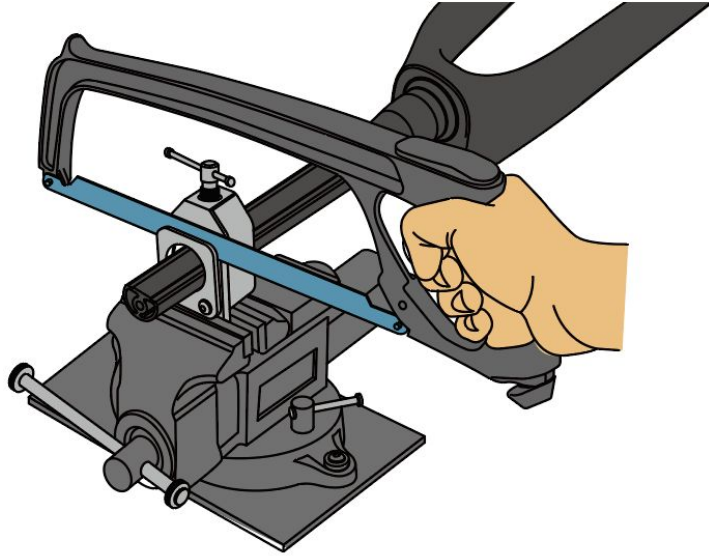
Factor frame sets are shipped with 7X9 mm outer rail clamps for carbon rail saddles. 7x7 mm outer rail clamps for traditional saddle rails are available through your Factor dealer.

- Apply carbon paste liberally to the SP clamp assembly, assemble the seat post clamp, adjust saddle angle and seatback, and tighten to 12Nm.

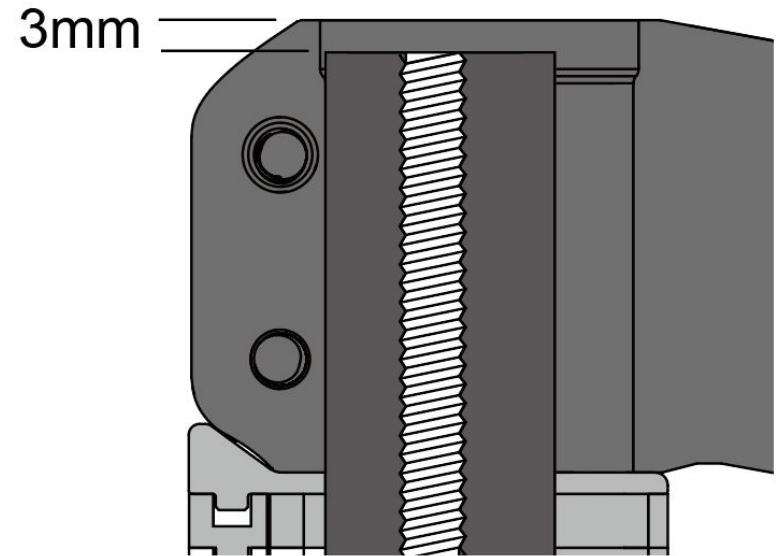


Steerer

- Working with your mechanic determine the correct number of spacers, and cut the fork steerer tube as shown below



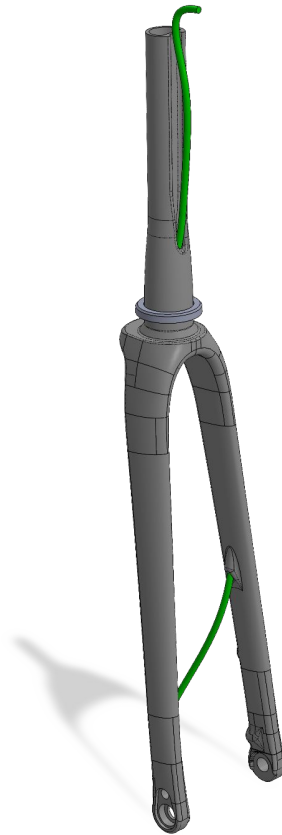
Pre-cut fork steerer making sure that it is cut 3mm below the top of the stem.



WARNING! Only use a maximum of 40mm of spacers (including tall headset cover) supplied with the frameset.

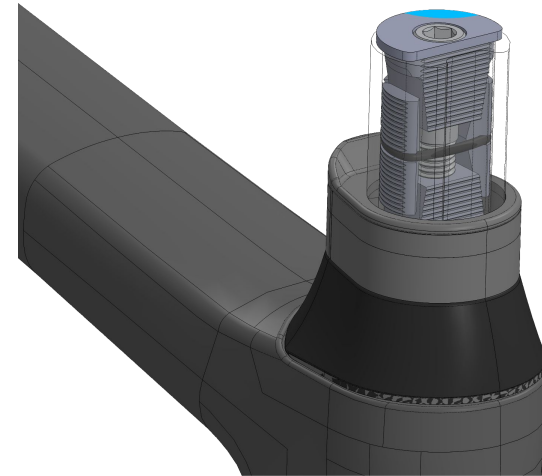
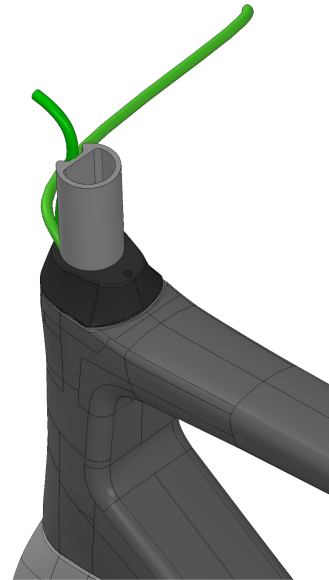
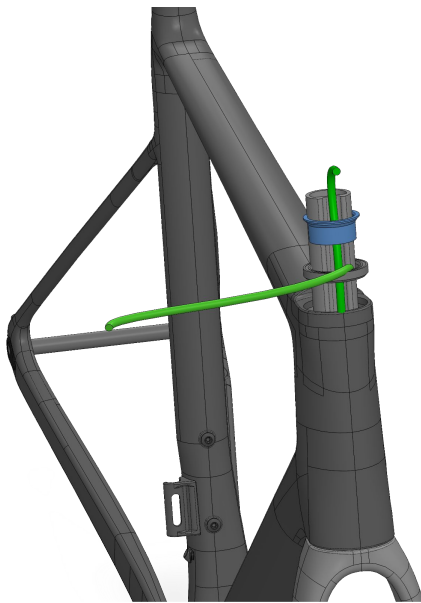
Fork mounting

- Fish the front brake hose through the fork, from the bottom up. Pass the lower bearing over this hose and the cut steerer tube
- Lightly grease the lower bearing and install the fork in the frame, at the same time retract the rear brake hose in its anti-rattle housing



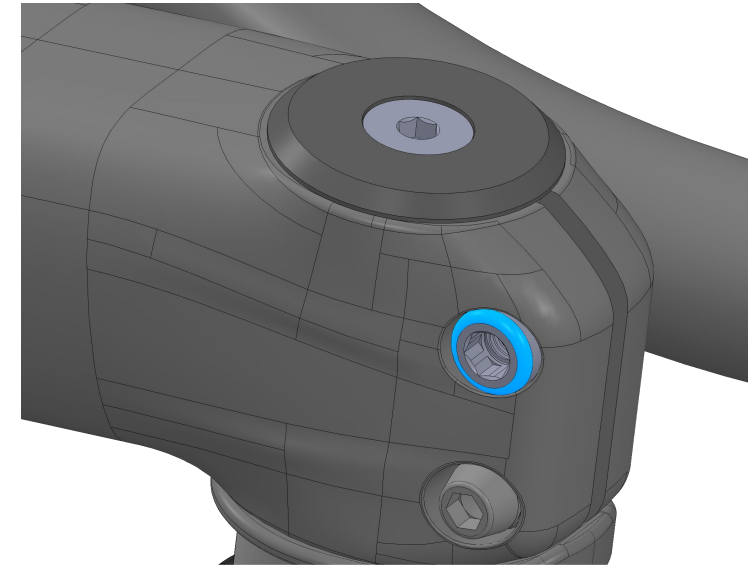
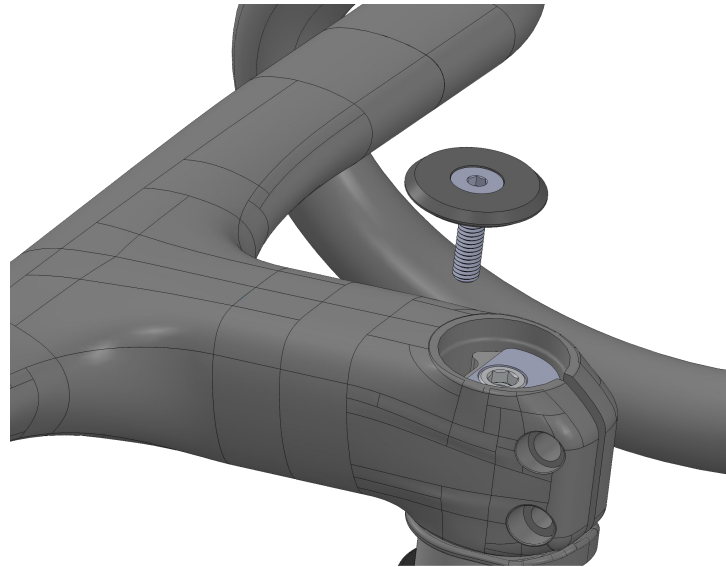
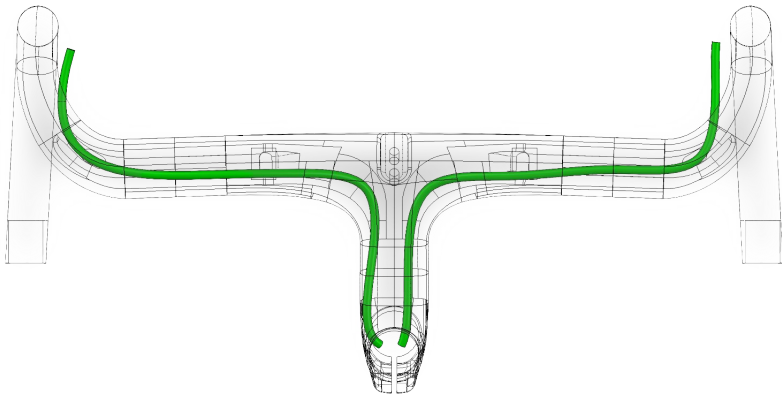
Top bearing

- Lightly grease the top bearing, and the split ring.
- Pull the hoses through the top bearing, the split ring and your chosen height dust cover.
- Assemble spacers as required
- Ensure the shape matching spacer is included if the Black Inc HB01 (non-aero) is used.
- Bottom out the compression plug onto the top of the steerer, and tighten to 8 Nm



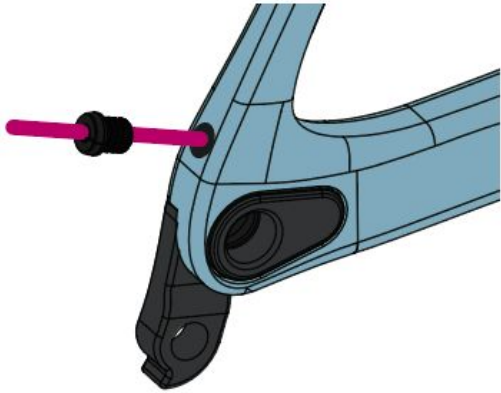
Fork mounting

- Pull the brake hoses through the handlebar carefully, entering at the rear of the stem and exiting at the shifter
- Apply a generous amount of carbon post to the steerer tube, the stem, and the expansion plug
- Tighten the preload cap until any rocking motion at the bearings stops, however take care to not over tighten
- Tighten the stem bolts to 5.2 Nm

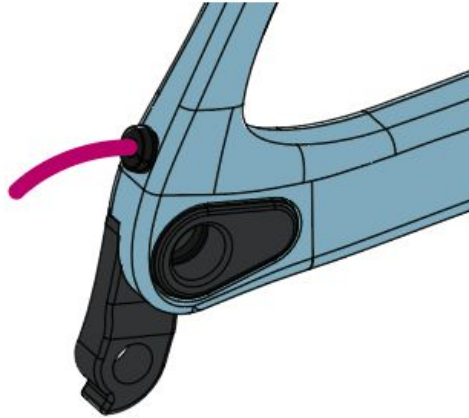


Grommets

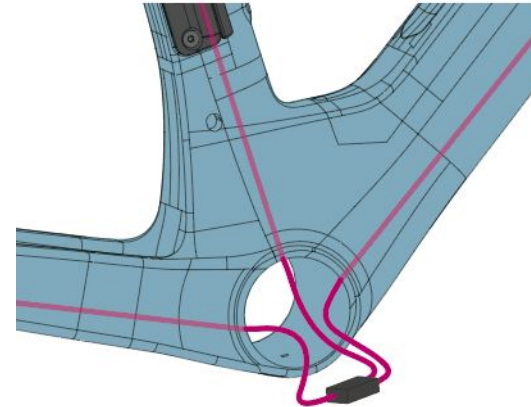
- Install the front and rear grommets



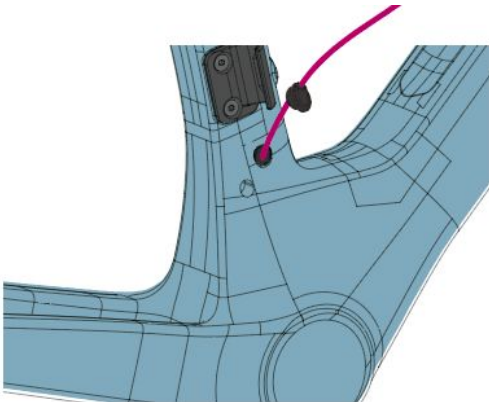
Route the rear derailleur Di2 cable through the chainstay.



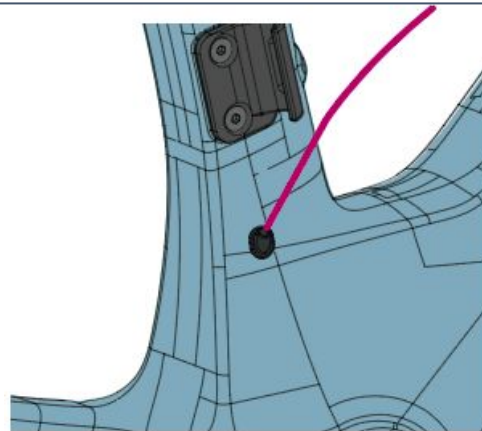
Install Di2 cable grommet.



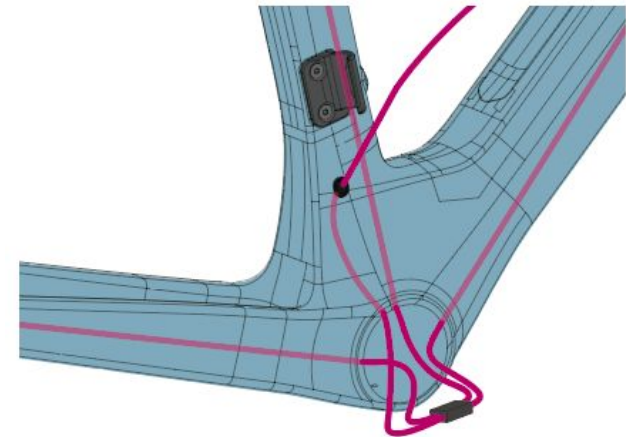
Connect to the Di2 Junction B



Route the front derailleur Di2 cable through the seat tube hole to the bottom bracket exit port.



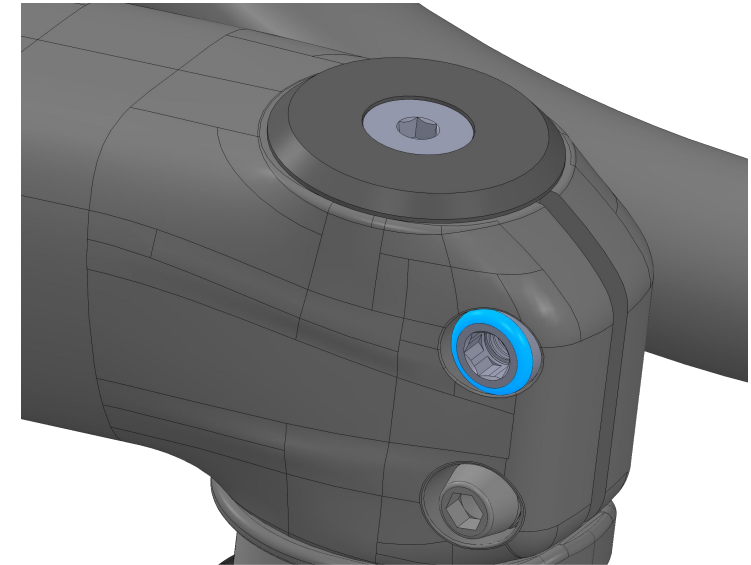
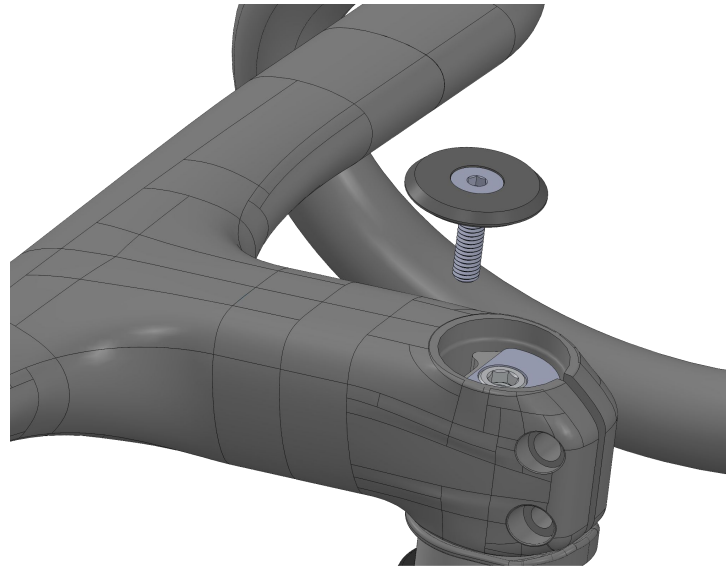
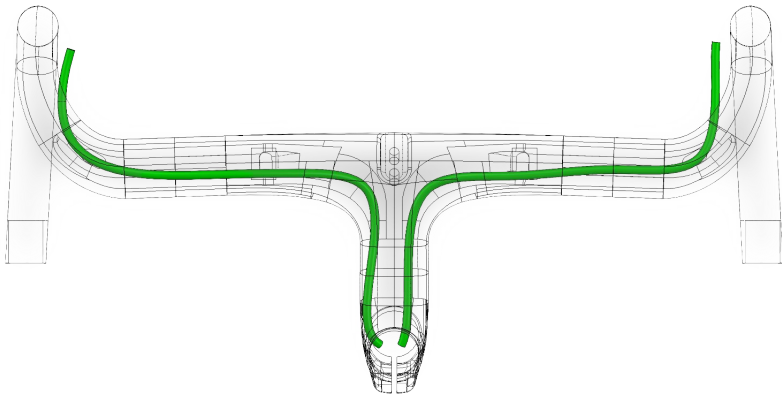
Install Di2 cable grommet.



Connect to the Di2 Junction B

Fork mounting

- Pull the brake hoses through the handlebar carefully, entering at the rear of the stem and exiting at the shifter
- Apply a generous amount of carbon post to the steerer tube, the stem, and the expansion plug
- Tighten the preload cap until any rocking motion at the bearings stops, however take care to not over tighten
- Tighten the stem bolts to 5.2 Nm



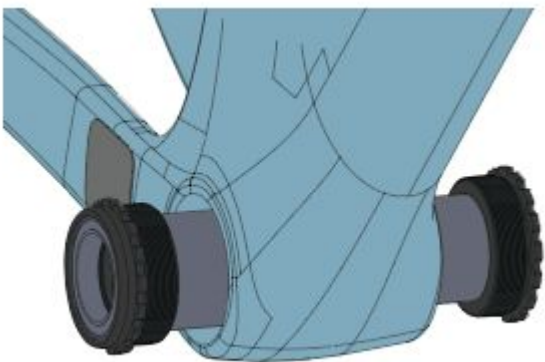
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Clean the inside of the frame bottom bracket & the bottom bracket cups with an isopropyl alcohol.

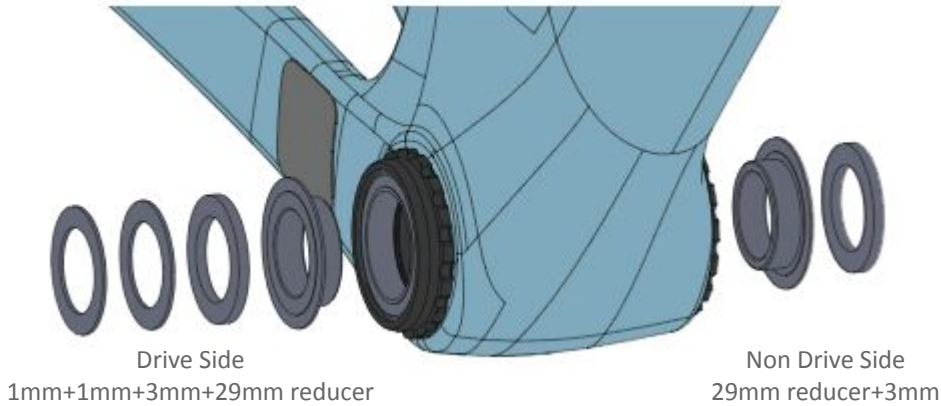


Apply a layer of good quality assembly paste to the threads of both bottom bracket cups. We recommend assembly paste from Morgan Blue (Auqaproof Paste) or r.s.p. (Creak Freak Assembling Paste).

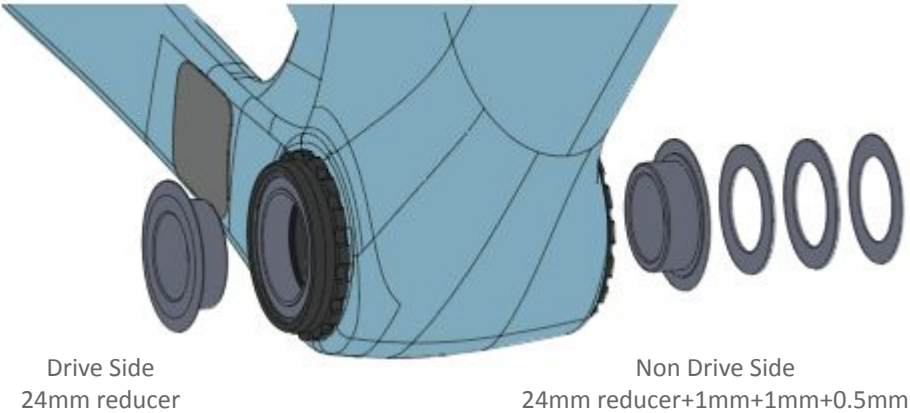


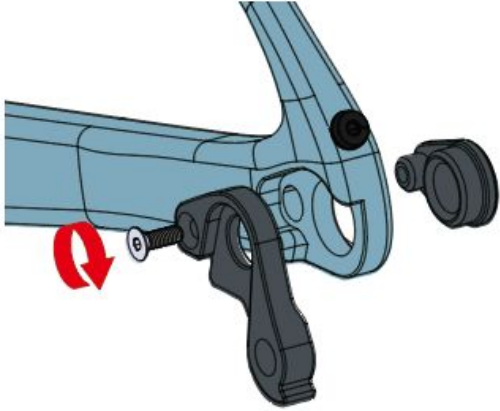
Thread the cups into the frame and torque the cups down to 30nm for the drive side and 40nm for the non drive side. We recommend using Park Tool BBT-47.

For SRAM DUB cranksets, install the included 29mm reducers and spacers in the following sequence.

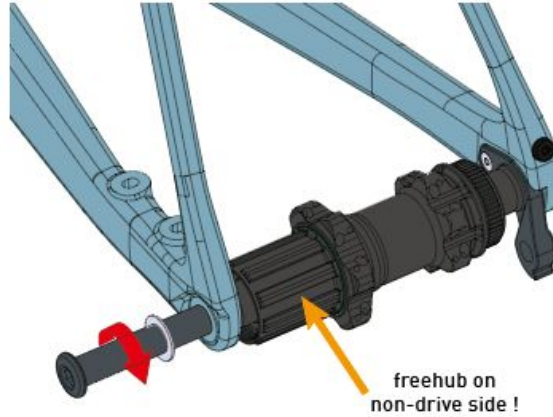


For Shimano Hollowtech II cranksets, install the included 24mm Wheels MFG reducers and spacer in the following sequence.

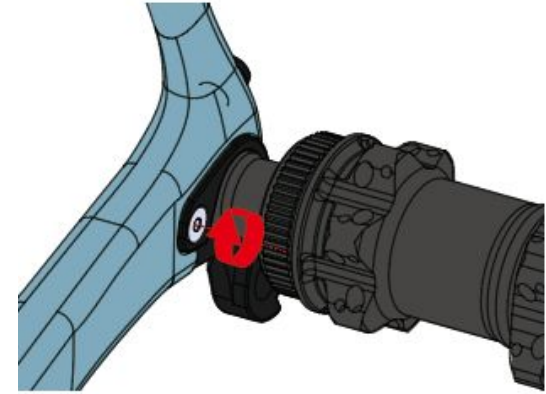




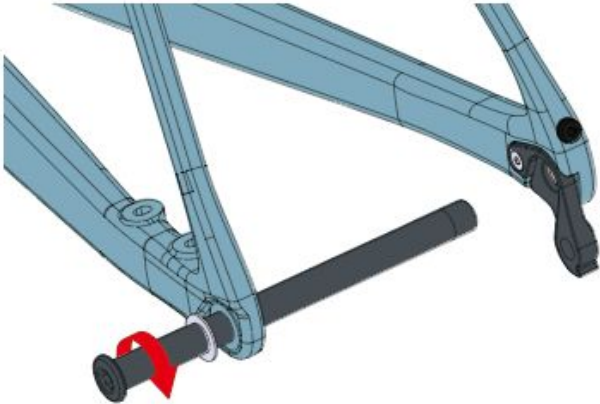
Apply Loctite 243 on bolt threads. Thread the bolt in but do not tighten, this will allow the insert to align when installing the axle



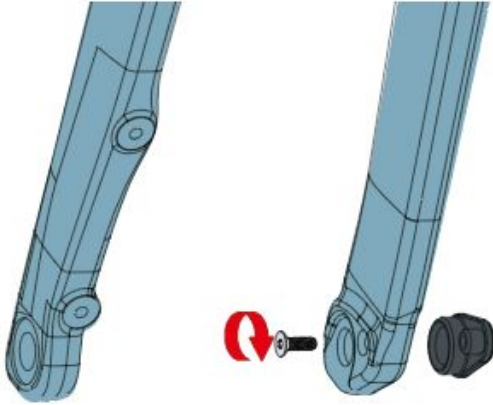
Install a rear hub in the dropout with the free hub on non-drive side. This will allow better access for the next step. Install the thru-axle with the nylon washer and tighten to **12Nm**.



After ensuring the dropout insert is correctly aligned, tighten the dropout bolt to **1 Nm**.

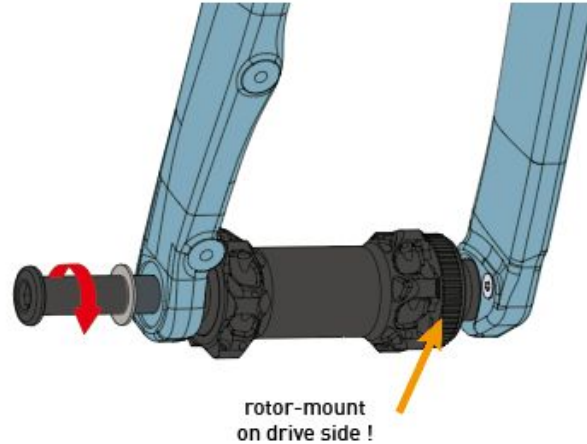


Remove the thru-axle and remove the hub. Install the rear wheel and tighten the thru-axle (with the nylon washer) to **12Nm**.

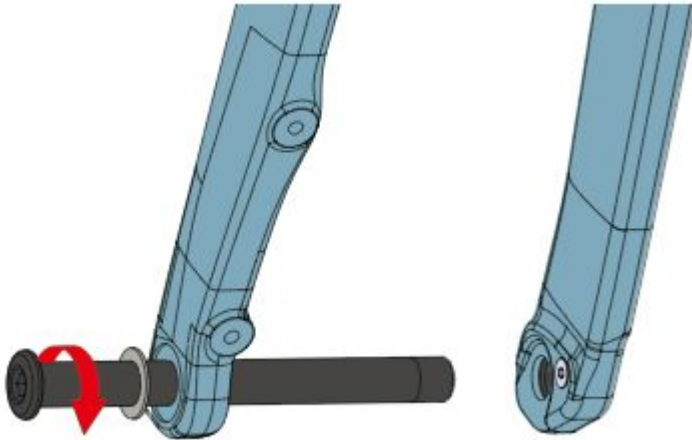
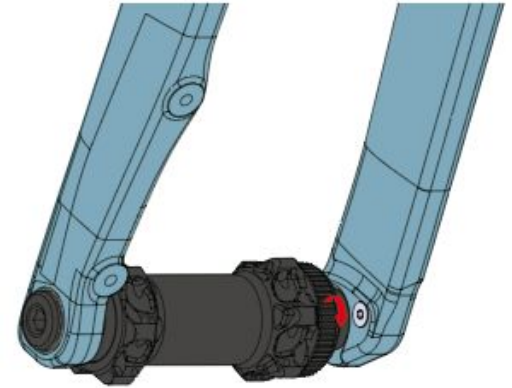


Apply Loctite 243 on bolt threads. Thread the bolt in but do not tighten, this will allow the insert to align when installing the axle

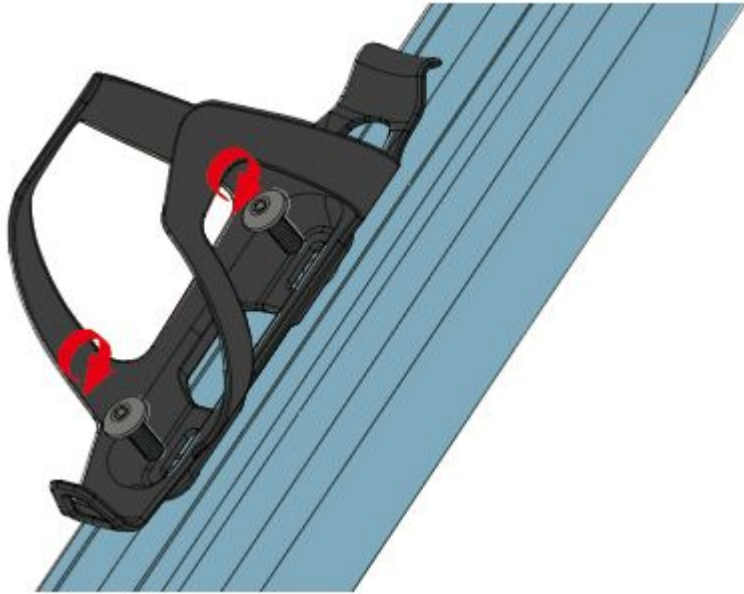
Install a front hub in the dropout with the free hub on non-drive side. This will allow better access for the next step. Install the thru-axle with the nylon washer and tighten to **12Nm**



After ensuring the dropout insert is correctly aligned, tighten the dropout bolt to **1 Nm**.



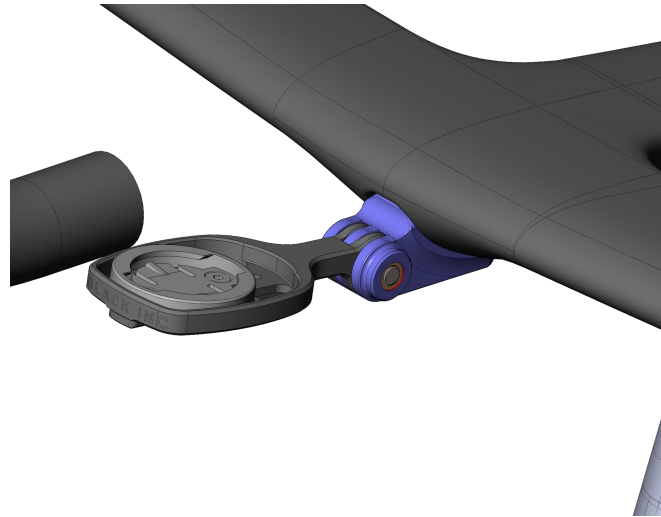
Remove the thru-axle and remove the hub. Install front wheel and tighten the thru axle (with the nylon washer) to **12Nm**.



Install cages and tighten M5 bolts with T20 Torx to **2 Nm**.

FDM

- If you are using a front derailleur, install the mount as shown, tightening to **3Nm**.
- If you aren't using a Front Derailleur mount, look for the supplied blanking plate and attach with a single screw.





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