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My E-117 Tri

Date of purchase: _____

Retailer: _____

Size: _____

Serial Number: _____

For the warranty to be valid, the bicycle must be fully assembled by an authorized Argon 18 dealer. High end components, particularly carbon parts, need extra care when assembled. These components must be installed using a calibrated torque wrench to make sure every bolt is at the right torque setting to prevent damage.

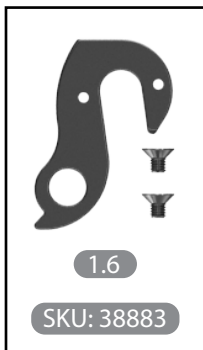


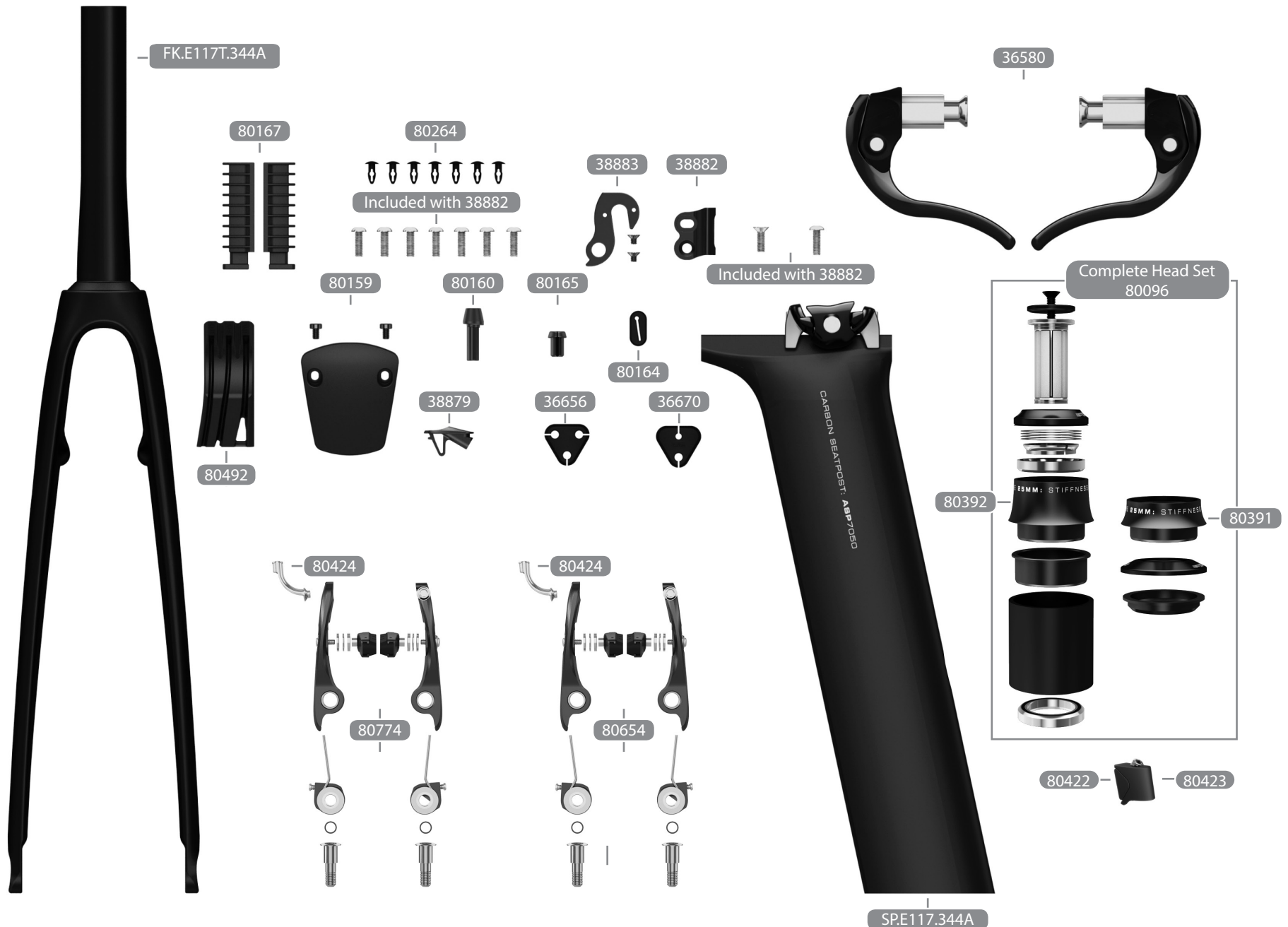
Tools needed for assembly

- 1: Bearing Cup Press (Park Tool HHP-2)
- 2: Allen Key Set
- 3: Grease
- 4: Utility Pick Set (Park Tool Item # UP-SET)
- 5: Clean Rags
- 6: Derailleur Hanger Alignment Gauge (Park Tool Item # DAG-2)
- 7: Cables and Housing Cutter
- 8: Carbon Paste
- 9: Loctite #242 or #243
- 10: Torque Wrench

First Aid Kit: Essential parts to always have on hand IN CASE OF EMERGENCY...THIS MIGHT SAVE YOUR RIDE!

- 1: Spare rear dropout (SKU: 38883)
 - 2: Spare brake pads corresponding to your wheel model (carbon or alloy)
 - 3: Seat clamp (SKU: 80423, 80422)
- IMPORTANT: the E-117 Tri's seat clamp (1.4) is not the same as the Nitrogen





Images are for reference only. Proportions are not accurate.
 Argon 18 reserves the right to modify/change parts of the frameset at any moment without prior notice.
 *for more info please consult notice on Seatpost clamp dated 2016-06-09

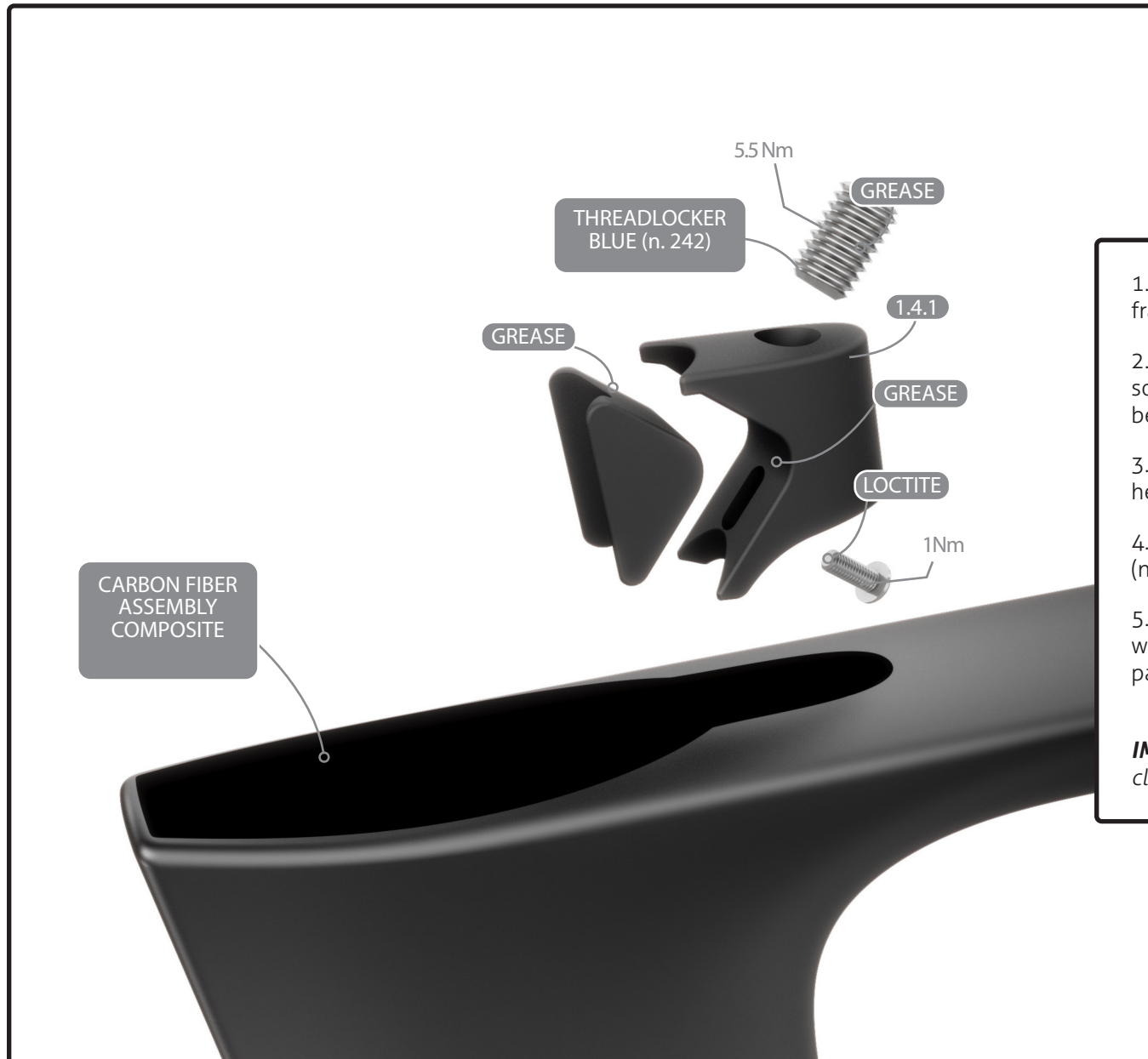
E-117 TRI 344A: 3. Parts' SKUs and Descriptions*

ARGON 18



Parts already assembled				
1.2	Rear Derailleur Hanger (incl. screws)	Frame	38883	1
1.3	Front Derailleur Hanger (incl. screws)	Frame	38882	1
1.7	Bottom Bracket Cable Guide (incl. screws)	Frame	80492	1
1.15	Cable Stopper	Frame	38879	1
1.11	Bottle Cage & Front Derailleur Screws	Frame	incl. with 38882	7
Parts				
	E-117 Tri Frame	-	-	1
	E-117 Tri Fork	-	FK.E117.344A	1
3	E-117 Tri ASP-7050 Seat Post	-	SPE117.344A	1
1.4.1	Seat Post Collar base (incl. screws)	Frame	80423	1
1.4.2	Seat Post Collar wedge (incl. screws)	Frame	80422	2
1.5	Top Tube Grommet (mechanical)	Frame	36656	2
1.6	Top Tube Grommet (electronic)	Frame	36670	2
1.8	Bottom Bracket Cover (incl. screws)	Frame	80159	1
1.10	Rear Derailleur Cable Stopper (mechanical)	Frame	80160	1
1.14	Plastic Plug	Frame	80264	7
1.16	Front Derailleur Cable Grommet	Frame	80164	1
1.17	Rear Derailleur Grommet (electronic)	Frame	80165	1
3.2	Internal Di2 Battery Support	Seat Post	80167	1 Set
4	Rear Brake Assembly (TKB138-3)	Frame	80774	1
4.2	Brake Noodle (fits TKB137-2 & TKB138-3)	-	80424	2
5	Front Brake Assembly (TKB137-2)	Fork	80654	1
6	3D Headset Assembly	Frame	80096	1
6.1	3D Headset Spacer (15mm) for No.37 HS	Frame	80391	1
6.2	3D Headset Spacer (25mm) for No.37 HS	Frame	80392	1
7	Jagwire Housing Kit	Frame	39014	1
8	Brake Levers TL-720	-	36580	1 Set

*Except for the frame itself, which is not sold as a spare part, all parts can be ordered by referring to their respective SKU number.



1. Place the seat post collar inside the frame.
2. Insert the seatpost (3.1) on which some carbon fiber assembly paste has been applied.
3. Position the seatpost to the desired height.
4. Apply a drop of blue Threadlocker (n. 242) on the bolt's thread
5. Tighten the set screw at max. 5.5Nm while leaving a space between the two parts allowing them to slide.

IMPORTANT: The E-117 Tri+'s seat clamp is not the same as the Nitrogen



1. Unscrew main bolt (A) as far as possible without fully removing from the lock nut.

2. Install the saddle rails into the seatpost clamp (B).

3. Slide saddle clamp (B) onto rocker (C).

4. Tighten the bolt up at 12Nm.

See p.25 for saddle adjustment.

IMPORTANT:

The E-117 Tri+'s saddle rail clamp is made for aluminum and round-shaped saddle rails (For part numbers contact Ritchey).

For other types of saddle rails, please refer to the Tips and Troubleshooting section of this Assembly Guide (p.26).



The Di2 battery is hidden in the seatpost; use the Di2 battery holder (3.2) to fix the battery correctly. Apply a slight amount of grease on both parts.



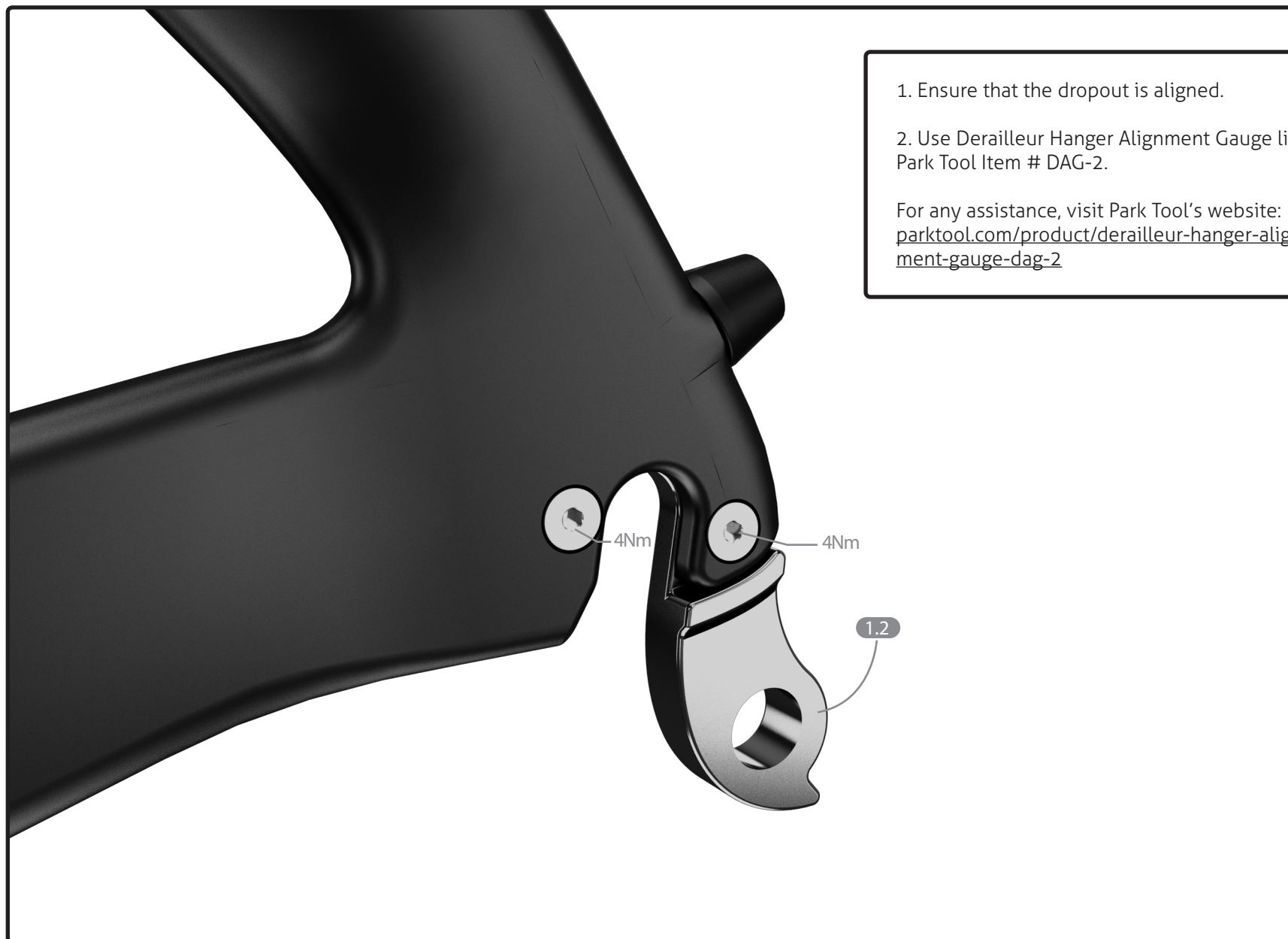
BEFORE ASSEMBLING YOUR NEW E-117 TRI, MAKE SURE THAT YOU HAVE ALL THE FOLLOWING:

1. Brakes and gears cables and housing set
2. Frameset parts checklist (see p.27)
3. Inspect the frame for cosmetic aspect (scratches, bumps, cracks, paint defect, etc.)
4. For reference, check serial number and write it on p.1
5. All the necessary bolts (refer to Frameset Parts, p.4)
6. For optimal shifting performance, use a dropout alignment gauge to make sure that the drive-side dropout is straight.

IMPORTANT:

The following parts are assembled on the frame. When assembling the bike, you will need to adjust these parts according to their torque specifications.

Parts installed on the frame	Description	Screw type	Torque Nm	Detail
Front derailleur hanger	Screw (2)	5mm	4Nm	Loctite
Rear derailleur hanger	Screw (2)	3mm	4Nm	Loctite
Bottle cage	Screw (7)	4mm	3Nm	Grease
Bottom bracket cover	Screw (2)	4mm	2.5Nm	Grease





The front derailleur hanger can be adjusted according to the front derailleur angle in order to get an equal curve between the derailleur and the big chain ring. Once at the right angle, use blue 242 Loctite and screw in at 4Nm.

LOCTITE

4Nm

4Nm



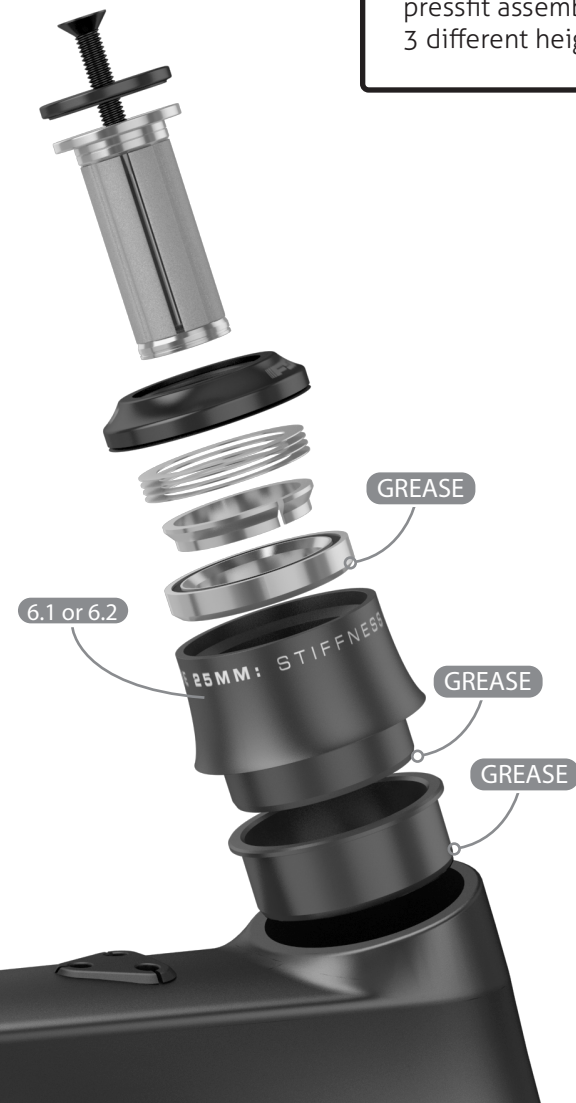
Install the 3D headset (6) according to the pressfit assembly guide. You can choose from 3 different heights: 25mm, 15mm, or 0mm.

IMPORTANT:

No more than 30mm of spacers can be placed between the stem and the top cap of the 3D system.

The steerer must be trimmed no more than 5mm above the stem. The use of more than 5mm of spacers above the stem could void the efficiency of the compressor.

These practices will automatically cancel any warranty claim against the manufacturer.





STEP 1

First, you must assess which setup suits your needs: **25mm, 15mm or 0mm.**

STEP 2

Inspect the bike's head tube for any sharp edges and apply a small amount of grease.

STEP 3

For the **25mm and 15mm** setups, lightly grease the bottom section of the 3D bearing holder (6) and insert the plastic sleeve (7).

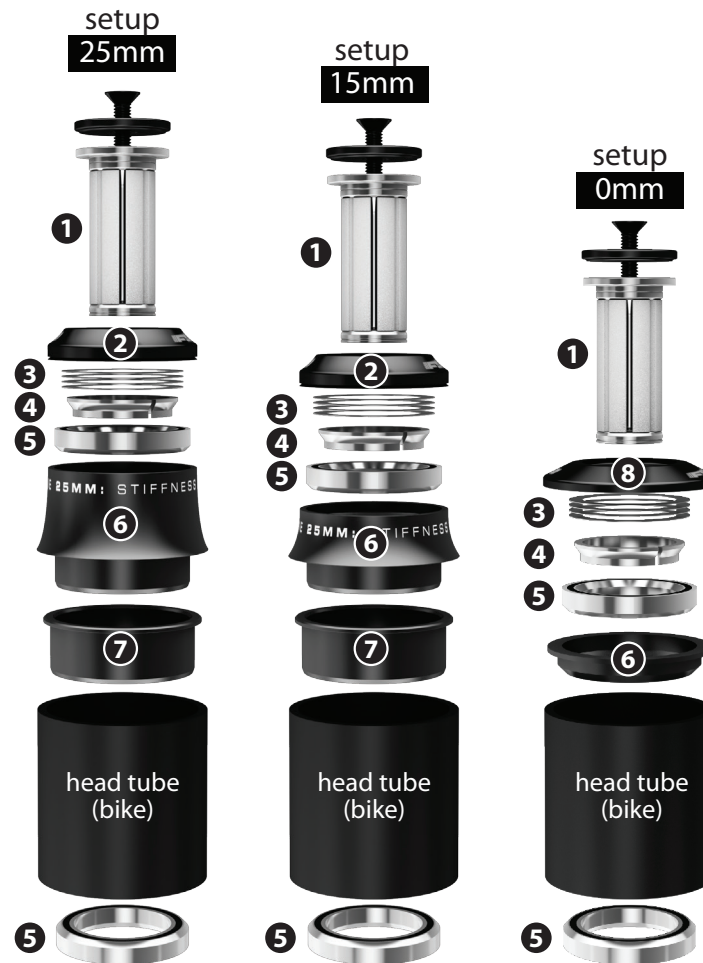
STEP 4

Position the headset inside the head tube. Place the top 3D assembly with the headset bearing inside (this will prevent the sleeve from getting damaged). Add the compression ring (4) on top of the bearing, then add the press fit 3D system tool and softly press down the assembly until it bottoms out using a Bearing Cup Press (**Park Tool HHP-2**). Then, insert the bottom bearing (5), micro spacers (3) and top cap (2), slide the fork and stem and measure the steerer length needed.

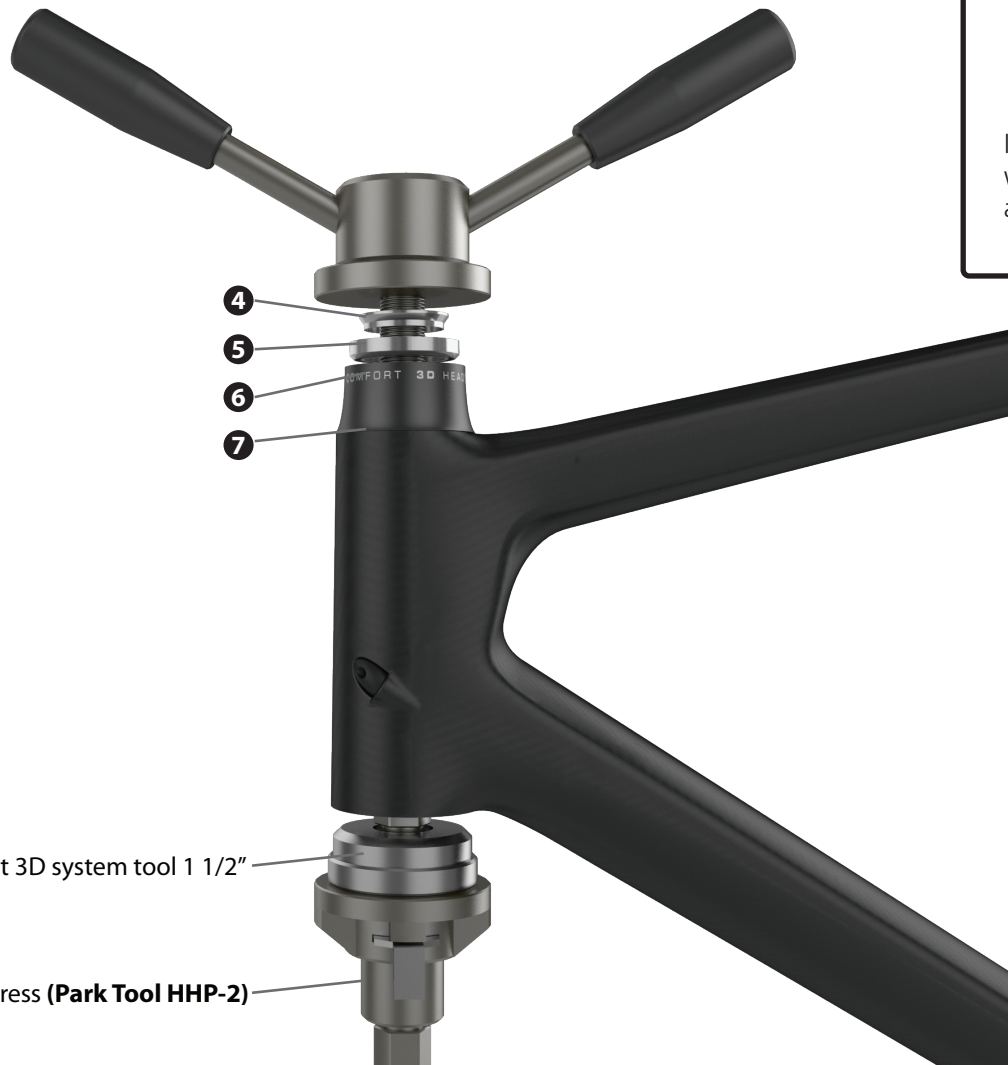
For the **0mm setup**, do not use the plastic sleeve. Install the 3D bearing holder (6) with grease applied directly inside the frame.



To remove the 3D bearing holder, insert the **Park Tool RT-1** and then tap it carefully until the spacer comes out.

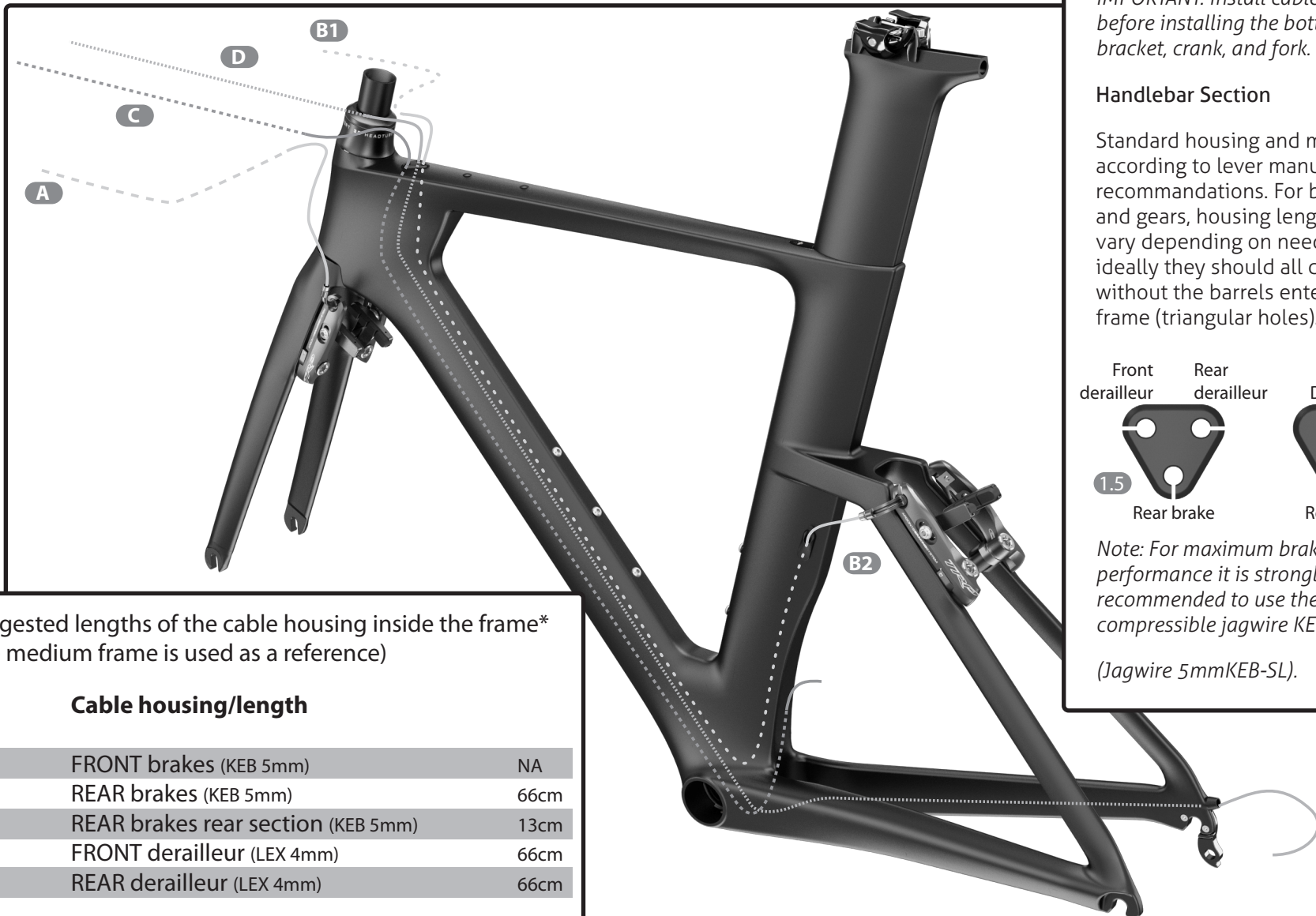


- ① Compressor
- ② Top cap
- ③ Micro spacers
- ④ Compression ring
- ⑤ Bearing
- ⑥ 3D bearing holder
- ⑦ Plastic sleeve (no need for 0mm setup)
- ⑧ Top cap for 0mm setup



IMPORTANT : Use the Press Fit 3D system tool 1 1/2" with the Bearing Cup Press (ParkTool HHP-2) to avoid any damage on the bike frame.

- ① Compressor
- ② Top cap
- ③ Micro spacers
- ④ Compression ring
- ⑤ Bearing
- ⑥ 3D bearing holder
- ⑦ Plastic sleeve (no need for **0mm** setup)
- ⑧ Top cap for **0mm** setup



Suggested lengths of the cable housing inside the frame*
(the medium frame is used as a reference)

Cable housing/length

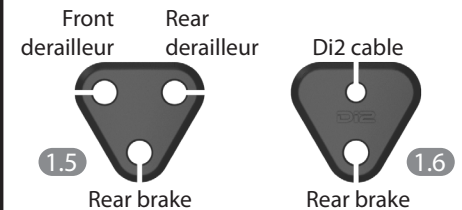
A	FRONT brakes (KEB 5mm)	NA
B1	REAR brakes (KEB 5mm)	66cm
B2	REAR brakes rear section (KEB 5mm)	13cm
C	FRONT derailleur (LEX 4mm)	66cm
D	REAR derailleur (LEX 4mm)	66cm

* Does not include handlebar section, as too many variations can occur.

IMPORTANT: Install cable housing before installing the bottom bracket, crank, and fork.

Handlebar Section

Standard housing and metal cap according to lever manufacturer's recommendations. For brakes and gears, housing lengths may vary depending on needs but ideally they should all connect without the barrels entering the frame (triangular holes).



Note: For maximum braking performance it is strongly recommended to use the non-compressible jagwire KEB housing

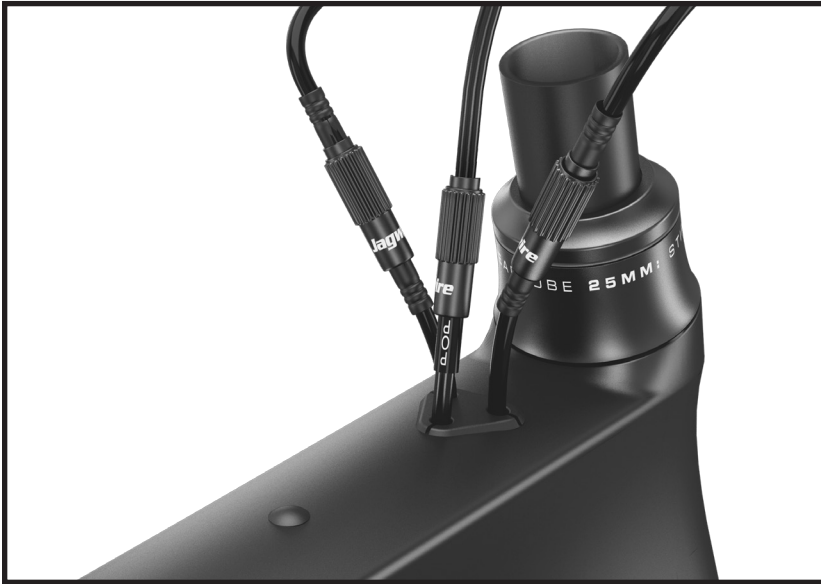
(Jagwire 5mmKEB-SL).



Bottom Bracket Section

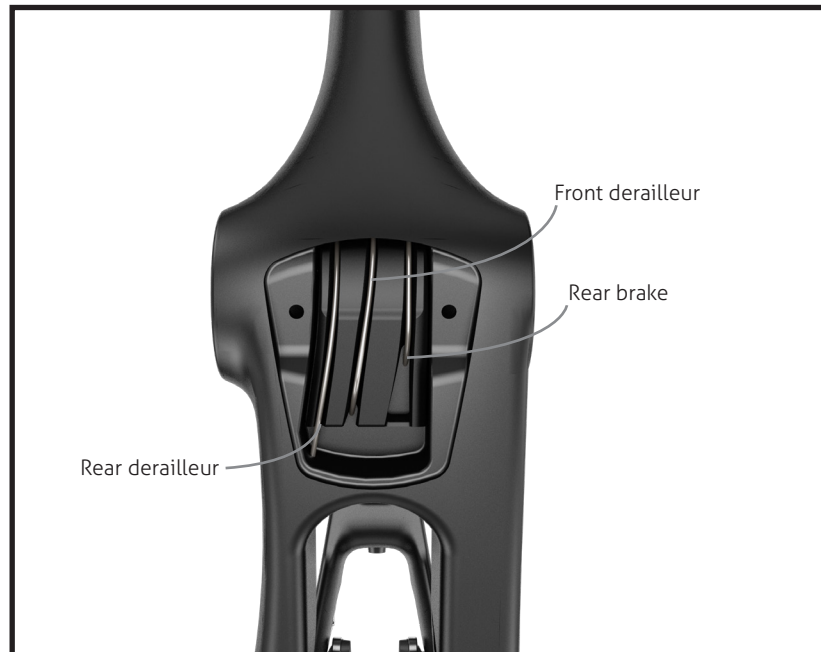
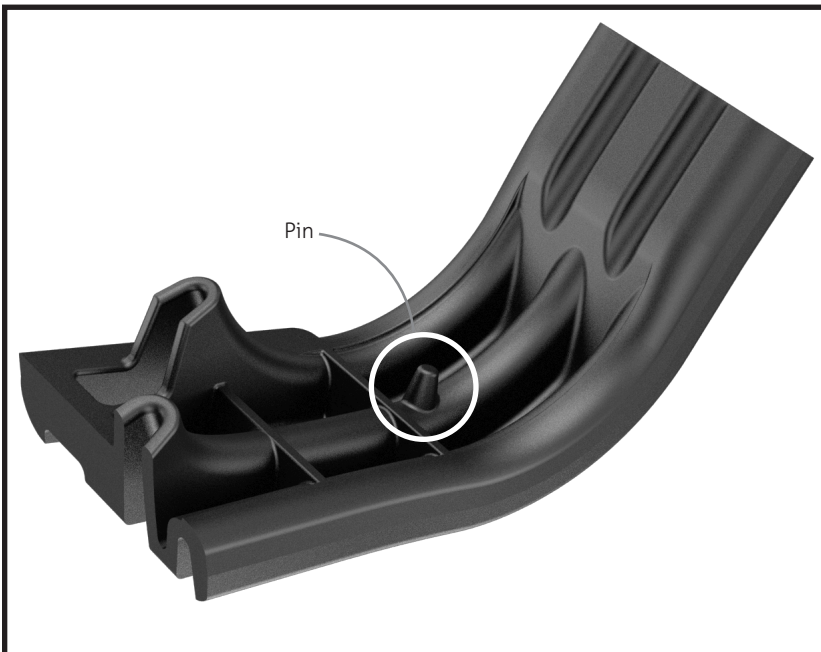
1. Measure approximately 660mm length (for a medium-sized frame) of one unit of KEB brake housing (non compression housing) and two units of LEX 4mm gear housing (mechanical).
2. Install plastic caps at each tip of the gears' housings.
3. Install classic metal cap on the bottom bracket guide's section of the brake's housing and the supplied POP metal cap on the front tip of the brake's housing in order to connect with the barrel.
4. Remove the cable guide (1.7) under the bottom bracket.
5. Connect the 3 housing length to the bottom bracket's guide according to inscriptions (RD: Rear Derailleur, FD: Front Derailleur, RB: Rear Brake).

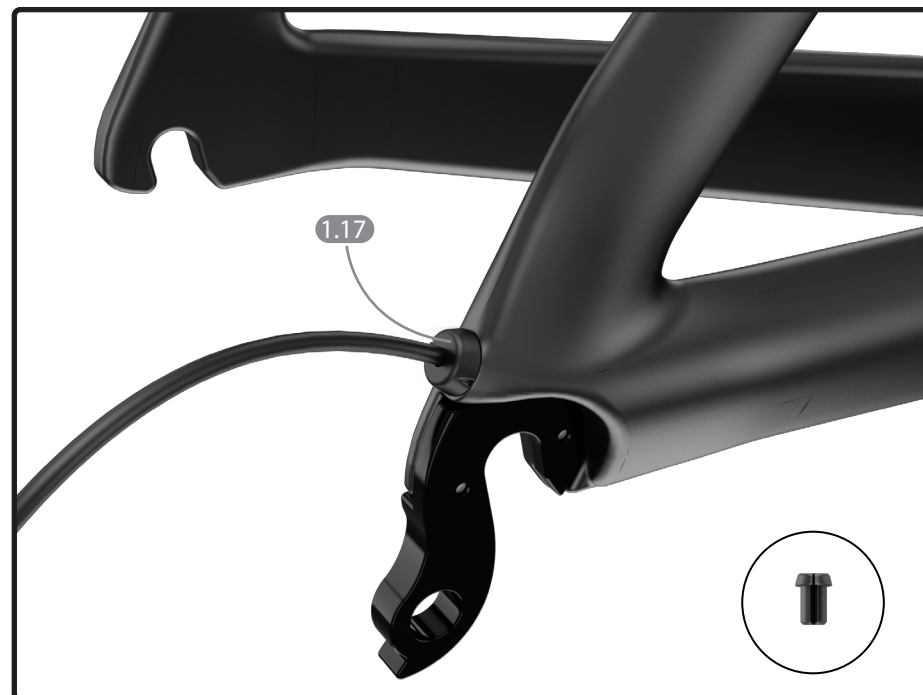
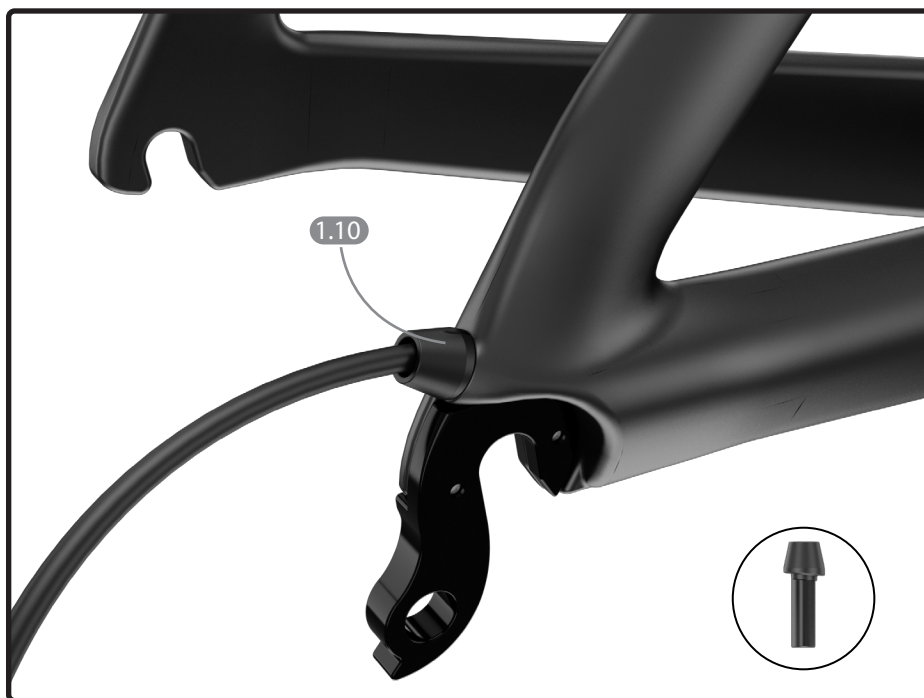




6. Pass the cable housings inside the downtube until they come out the top tube.
7. Be sure that the guide's pin is inside the frame's hole.
8. With a hook take the housings out of the frame by the top tube's triangular hole.
9. Install 4mm barrel on gear housing.
10. Install 5mm barrel on KEB break housing with POP metal cap.

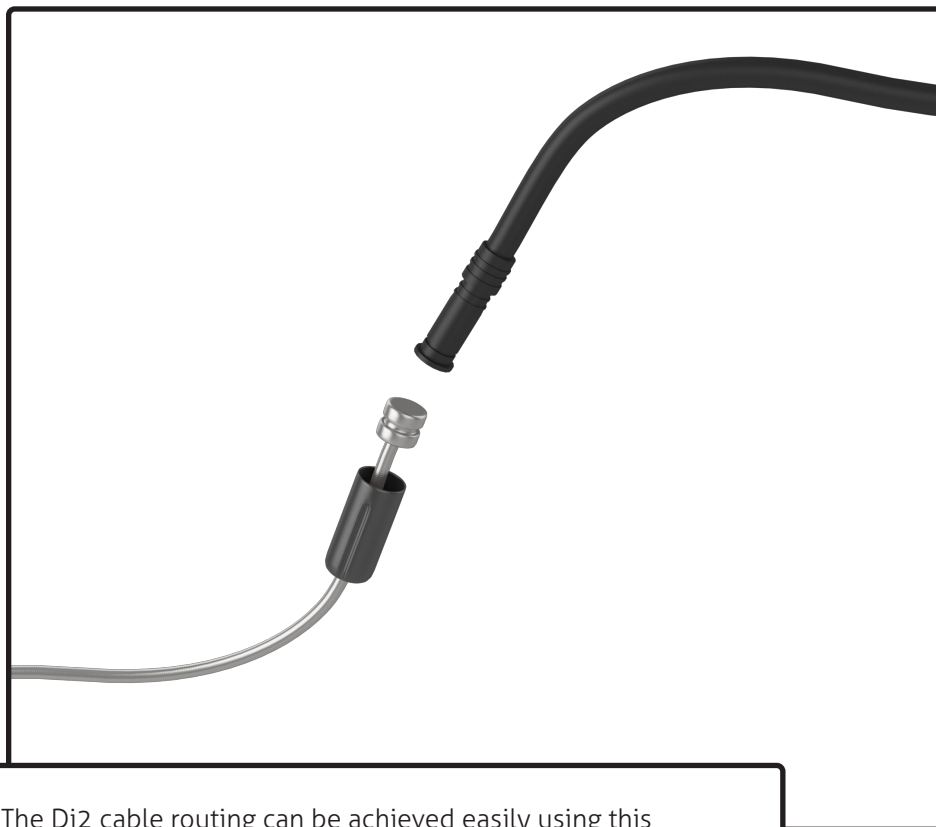
IMPORTANT: There is a preinstalled tube guide inside the drive-side chainstay. Insert the gear cable in the tube guide down to the rear derailleur.



**IMPORTANT:**

For the Di2 cable section that runs through the drive side chainstay, use the preinstalled tube guide that is supplied with the frame.

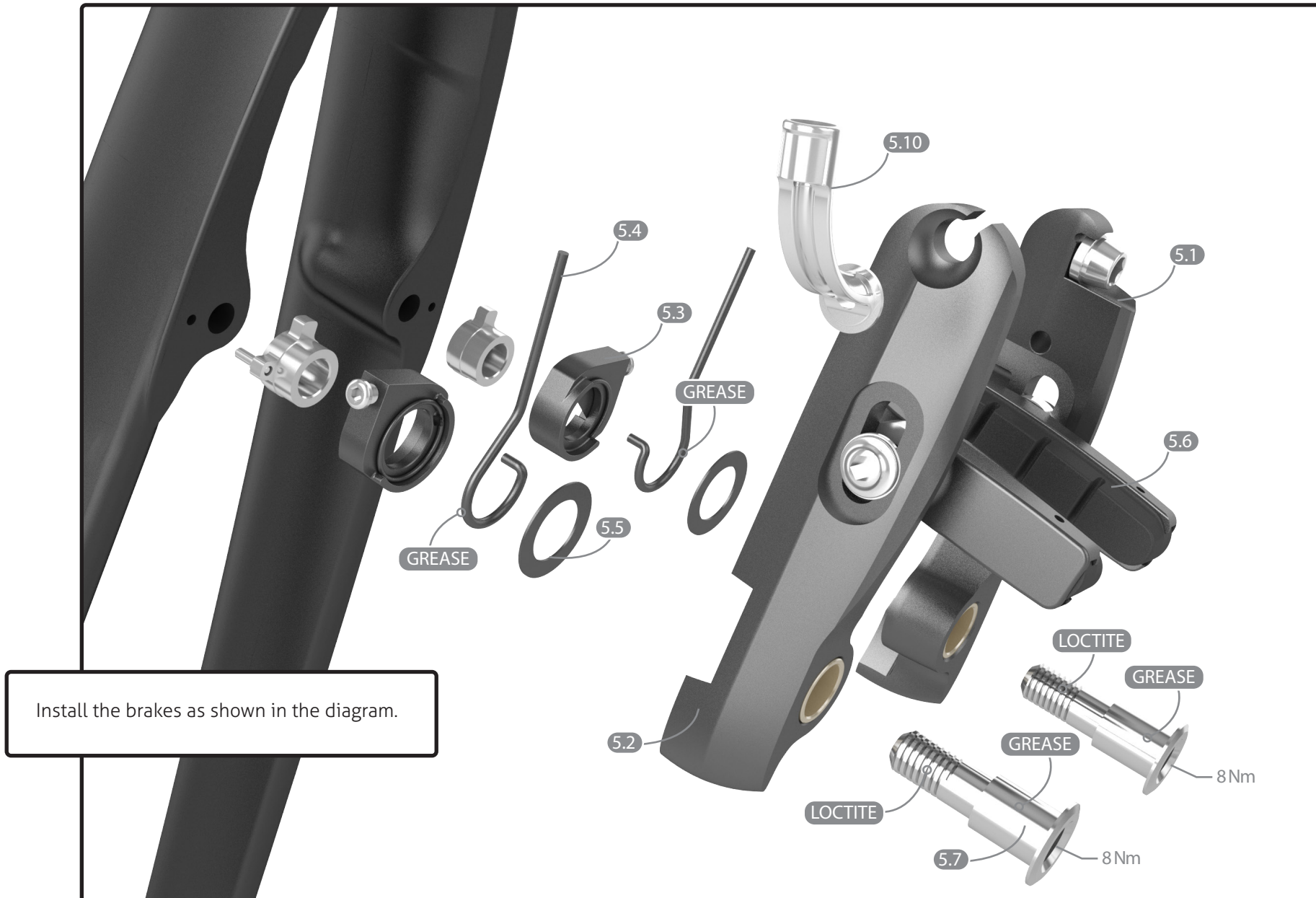
Use the proper cable stopper or grommet to fix the rear derailleur cable correctly depending if you use mechanical drive-train (1.10) or electronic shifting (1.17).

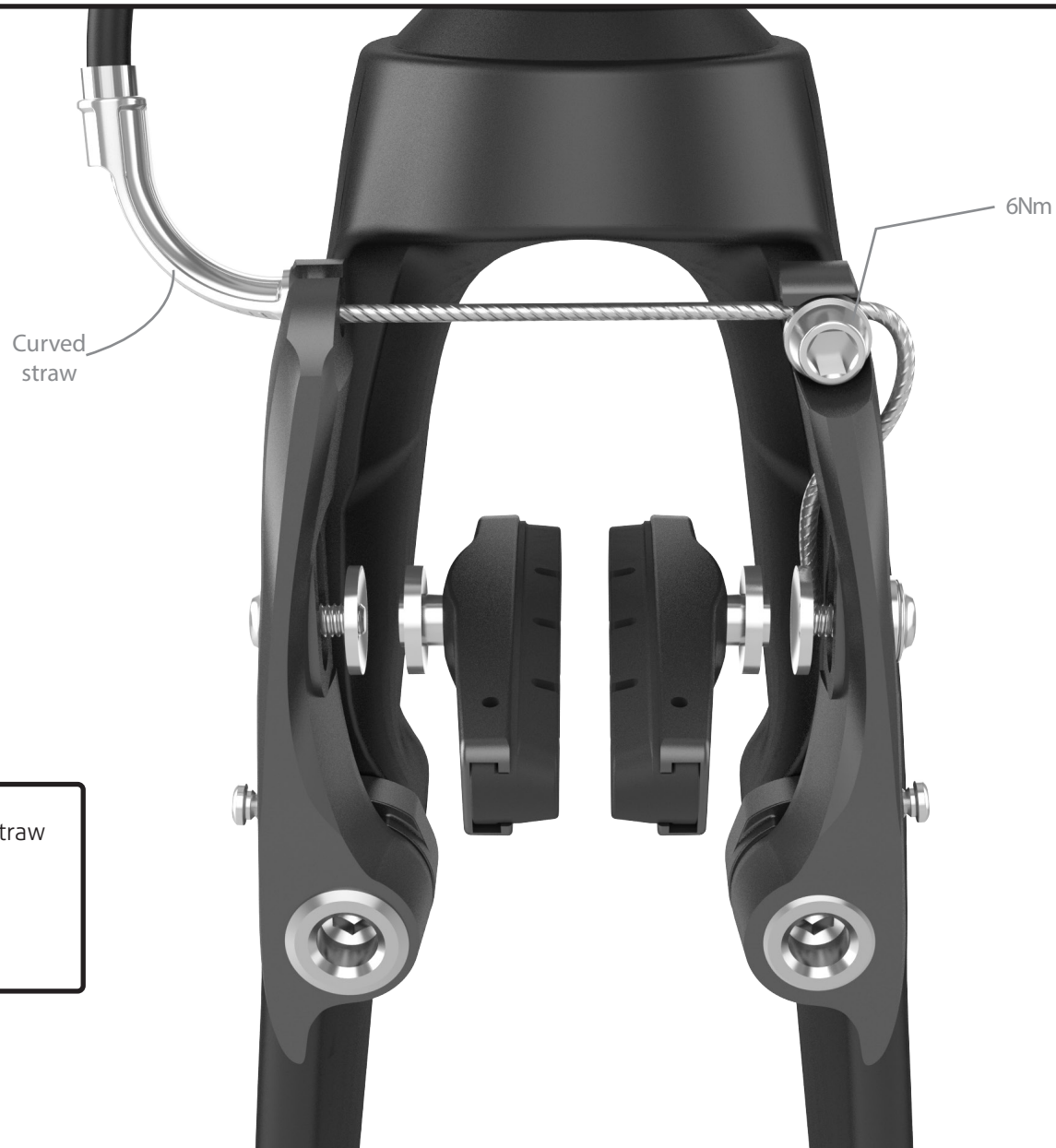


The Di2 cable routing can be achieved easily using this simple trick: use a gear cable and a metal cable end to fix the Di2 cable. For more information on Shimano Di2 electronic system installation, go to: si.shimano.com.



Use the proper grommet on the top tube to fix the cable correctly, depending if you use mechanical drive-train (1.5) or electronic shifting (1.6).





Pass the cable through the curved straw and then in the appropriate guide.

Fix the cable to the caliper with the 6mm screw and tighten it to 6Nm.



IMPORTANT: Depending on brake pad spacing or rim width, the brake arm may rub on the frame down tube. Make sure the pad spacing is appropriately adjusted.

Adjust brake pads according to the width of your rims:

You can configure the brake pad spacers with 1mm (17h), or 2mm (17i) depending of the rim width you are using.

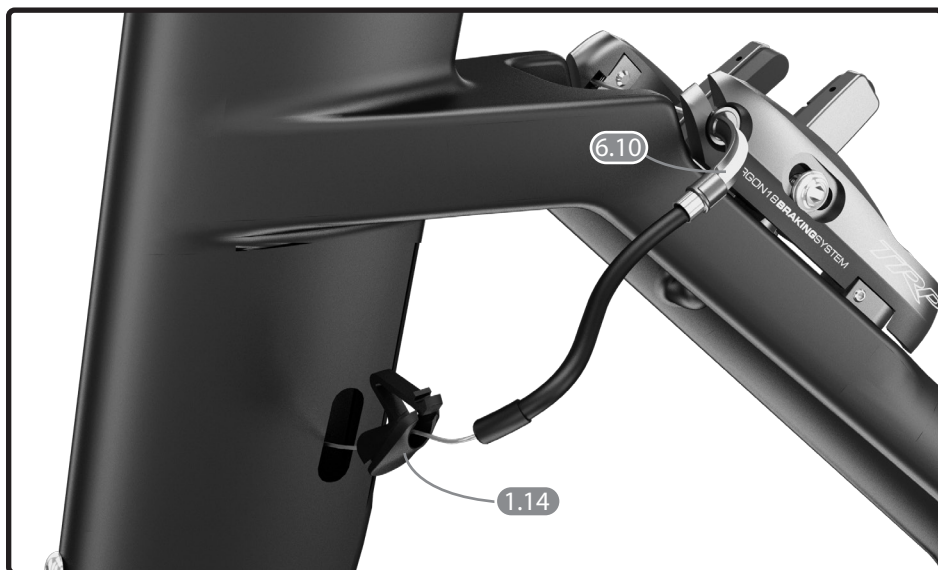
Spacers required according to the rim width

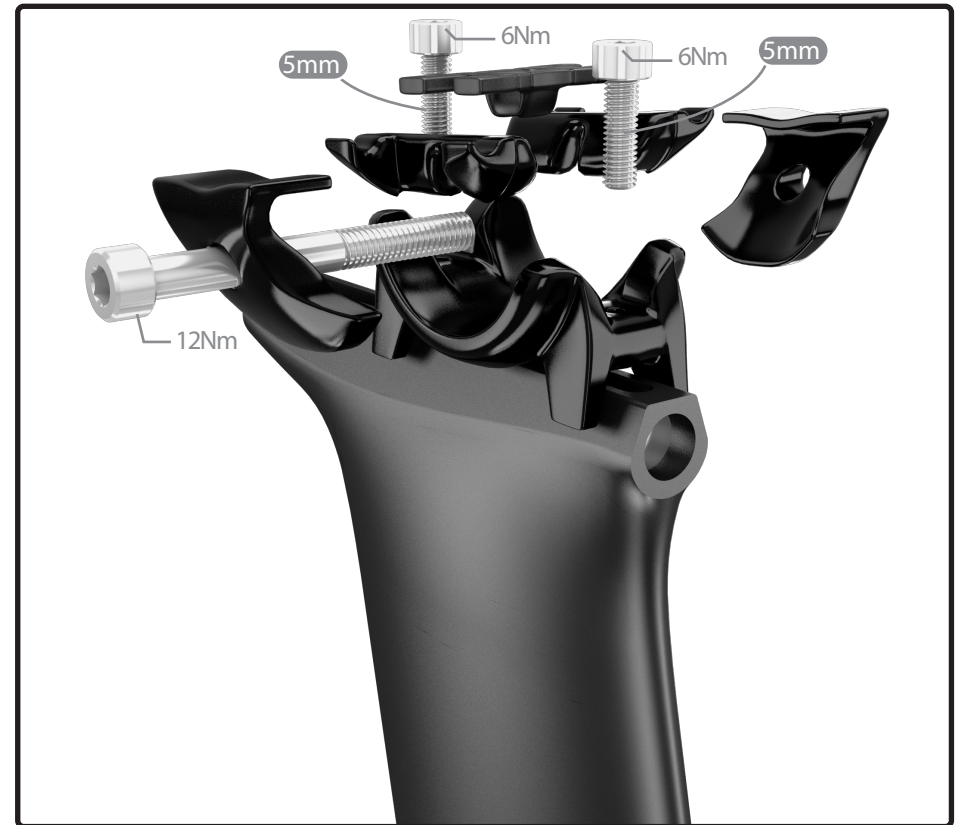
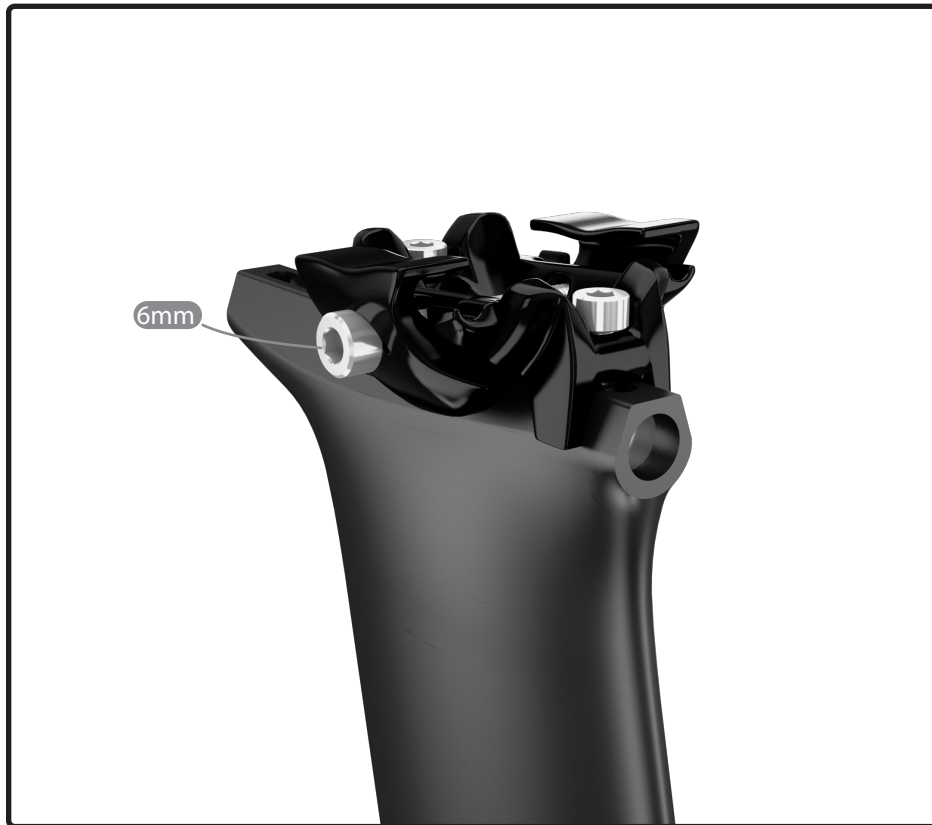
Rim width	Spacer combinaison
19mm (e.g.: Shimano C50)	2mm spacer
24mm + (e.g.: 808 clincher/Enve)	1mm spacer (thin pad may be required)





1. Take the cable stopper out of the seat tube.
2. From the bottom bracket guide, route the cable up and out of the outlet.
3. Put the cable stopper back on and insert housing (suggested length 130mm for medium-sized frame) with a metal cap. Slide it in the cable guide (6.10).
4. Slide the brake cable in the brake's retainer nut and fix it to the caliper at 6Nm.
5. Install plastic cap (1.8) over the bottom bracket, tighten the 2 screws at 2.5Nm.





For horizontal adjustment:

1. Loosen 5mm bolts.
2. Unscrew main bolt.
3. Install saddle rails into the rocker in the middle position.
4. Find desired setback.
5. Tighten the 5mm bolt up at 6Nm.
6. Adjust seat horizontally.
7. Tighten the 6mm bolt up at 12Nm.

If you are unable to find the desired setback, push the saddle up to the distance recommended by the manufacturer.

**1. Wheel/brake compatibility:**

If the brake pads do not clear the rim, remove the spacers (1mm or 2mm). *see p.21-22*

2: Front brake arm touching the downtube:

Inadequate spacing behind brake pads causing a wide angle. Changing the spacers behind the brake pads will straighten the brake arms.
see p.21-22

3: 3D pressfit headset rubbing:

Because some parts have a tight tolerance it might be necessary to put a slight amount of grease under the top cap.

4. Saddle rails:

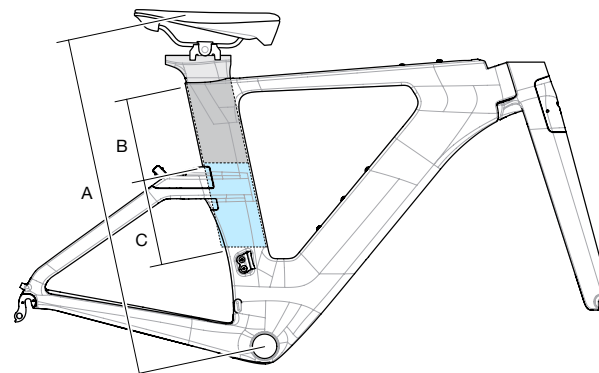
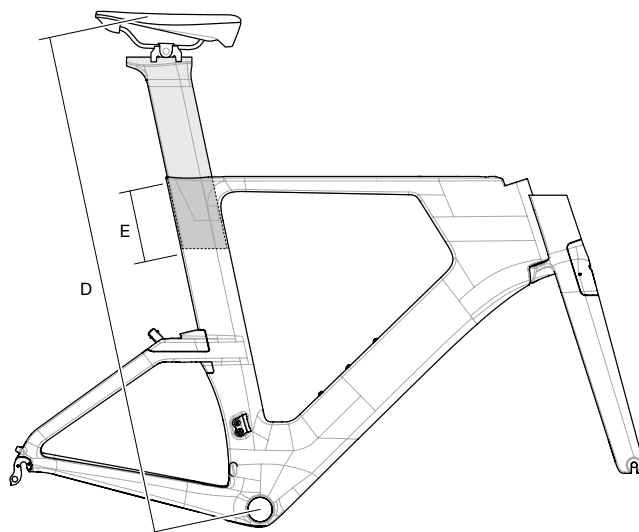
If your saddle rails are not round and made of aluminum, please refer to Ritchey's part numbers. These parts are not sold by Argon 18 but available on Ritchey's website (ritcheylogic.com).



If lack of brake power on the E-119, E-117 Tri and Tri+, Nitrogen and Nitrogen Pro, this might be caused by the failure to have likely used KEB housing. ALWAYS use brake pad compound compatible with wheel model suggested by the wheel manufacturer.

Compatibilities of standard tires with our bikes: 700x 25C – Any tire/rim combination compatible.

Please contact customer service for any further inquiries.



Refer to the tables below for details on Saddle Height and SeatPost insertion limits.

- i. The correct frame size must be determined according to the saddle height limits.
 - A. Minimum Saddle Height
 - D. Maximum Saddle Height
- ii. Depending on the size of the frame and the desired saddle height, the SeatPost might need to be cut.

B. Maximal insertion depth in the Frame's SeatTube.

C. Required SeatPost cut length to be able to adjust the Saddle Height at the Minimum position.

- Adjust the SeatPost cut length in accordance with your desired Saddle Height.

Required minimum SeatPost Cut length = C - ("desired Saddle Height" - A)

- Example: - For a desired Saddle Height of 600mm on a XS-E 117 Frame

- The required minimum SeatPost Cut length is: 105 - (600-585) = 90mm

E. Minimal insertion depth in the Frame's SeatTube.

Saddle Height Limits			E-117 / E-117+		
Size	Saddle H Min	ST Max Insert	SP Cut	Saddle H Max	SP Min Insert
	mm	mm	mm	mm	mm
	A	B	C	D	E
XX-Small	-			-	
X-Small	585	170	105	780	80
Small	625	210	65	820	80
Medium	640	225	50	835	80
Large	670	255	20	865	80
X-Large	695	275	0	890	80