

cervélo

P5X MANUAL

TABLE OF CONTENTS

Introduction	1	Mechanical Cable Routing	21
Frame Features	2	Smartpak Installation.....	23
Small Parts	3	Speedcase Installation	25
Frame Storage Cases.....	4	Internal Routing Guide Installation	26
Aerobar Components Overview	5	Stealthbox Installation.....	27
Fork Installation	7	Seat post Assembly	28
Brake Housing Installation.....	8	Cutting Seat Post	30
Basebar Wiring	10	Through-Axle Wheel Installation.....	31
Basebar Installation.....	11	Appendix: P5X Fork Owner's Instructions	33
Riser Assembly.....	12		
Extension and Pad Mount	13		
Arm Cup and Pad Installation	14		
Multi-Bend Extensions	15		
Aerobar Assembly Installation.....	16		
Electric Cable Routing.....	17		
Stem Cover Installation	19		

INTRODUCTION

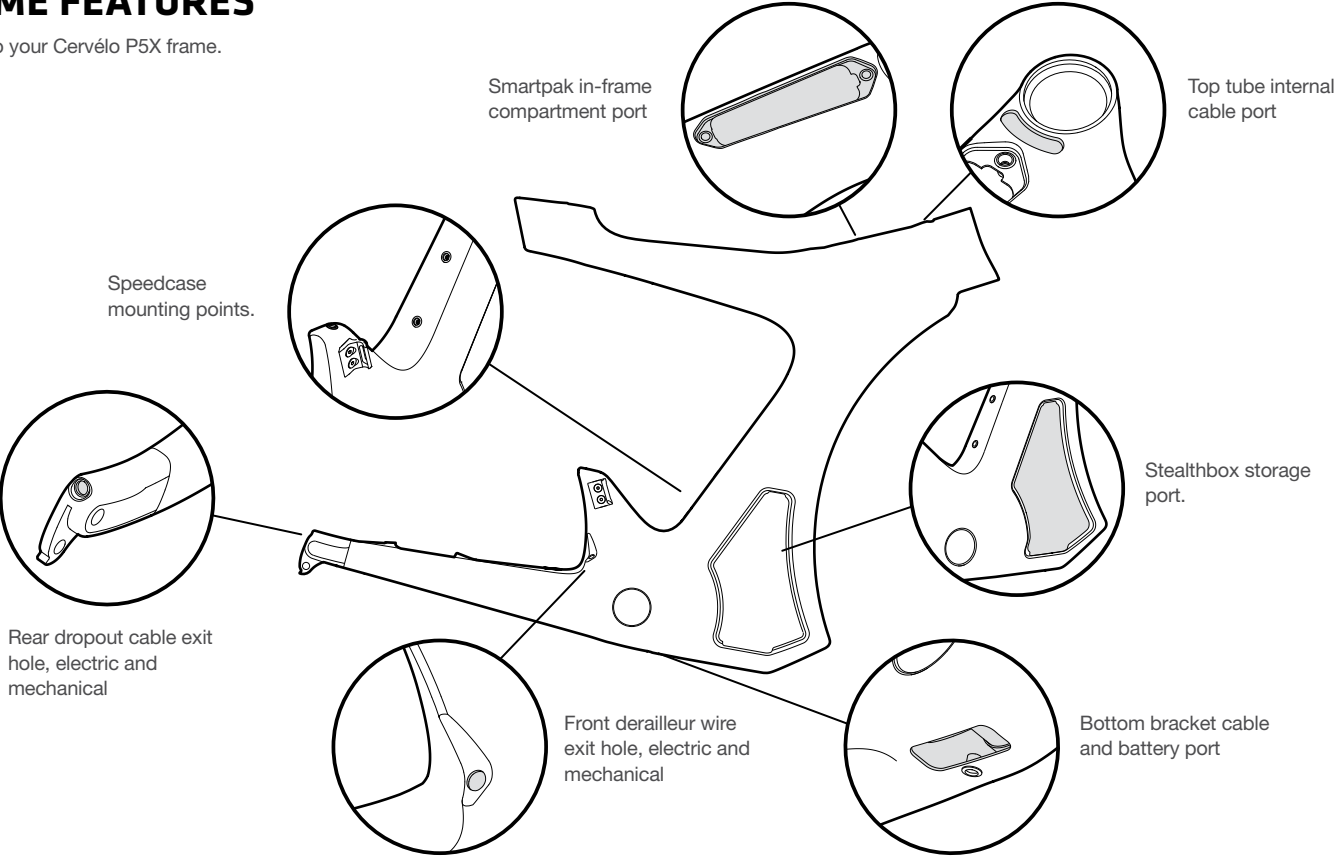
Three years of extensive research have resulted in the most advanced triathlon bicycle ever created. Not only engineered to carry you to victory, your P5X has been designed to support all of your service, nutrition and training requirements seamlessly. Although Cervélo strongly recommends that your bicycle be assembled by your Cervélo retailer, please take time to familiarize yourself with this assembly guide, as this bicycle contains unique components, and requires an understanding of the disassembly process for travel.

We thank you for making the choice to purchase your Cervélo P5X, and we hope that you enjoy the many hours you will spend with us.

This document has been prepared to guide you through the assembly of the unique features of the P5X, but is intended only as a supplement to the assembly instructions offered by your component manufacturer. Please pass these instructions to the consumer along with the completed bicycle.

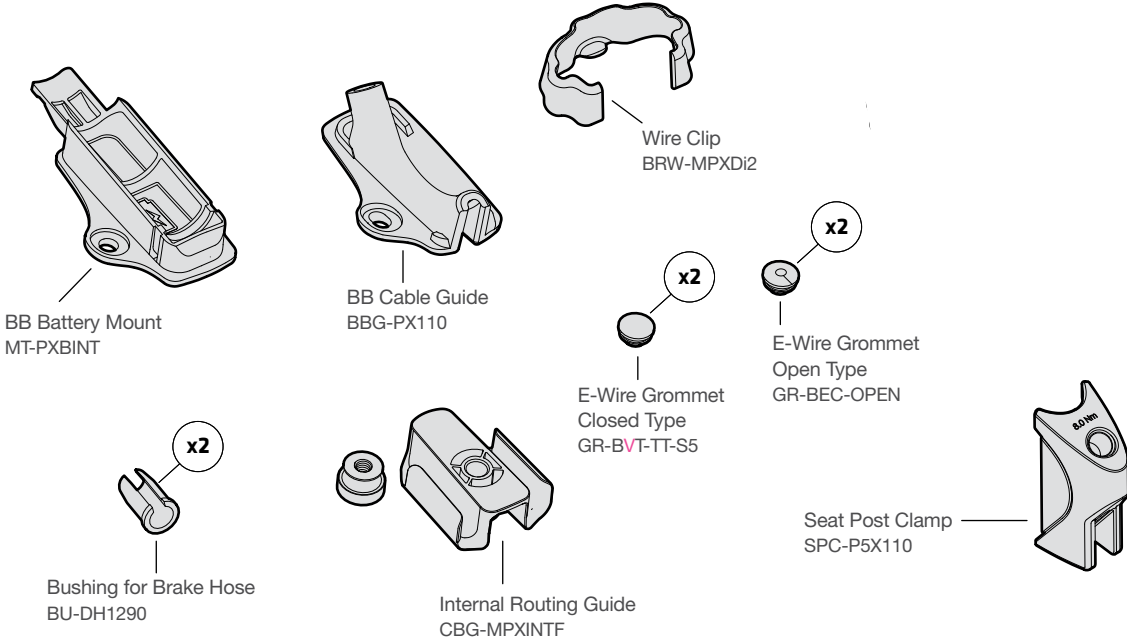
FRAME FEATURES

A guide to your Cervélo P5X frame.

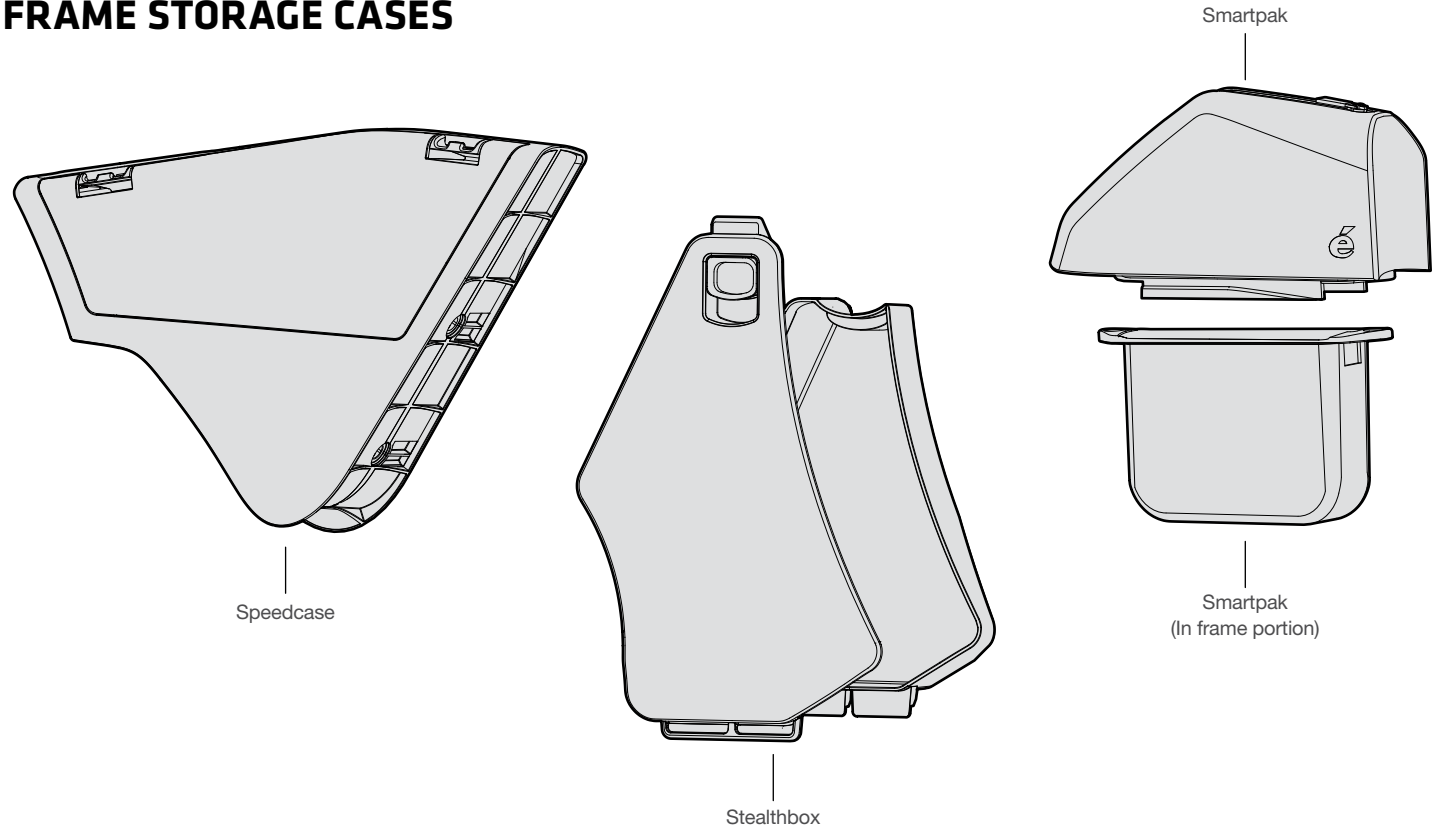


SMALL PARTS

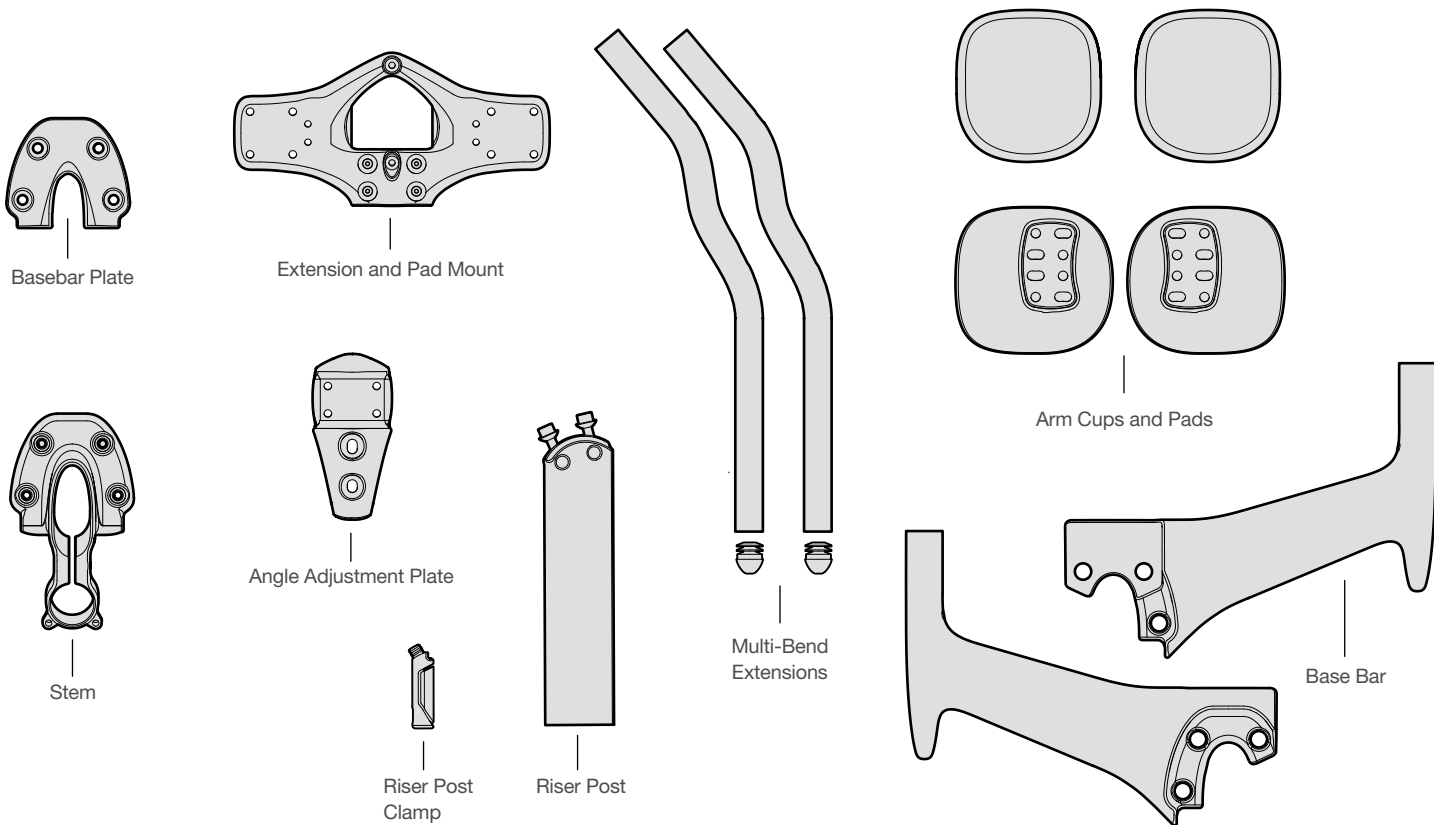
Designed to accommodate electronic, mechanical and hydraulic controls, the P5X frame is engineered to provide seamless integration of all shifting systems, regardless of method or brand. In order to do so, you will require the parts shown below:



FRAME STORAGE CASES

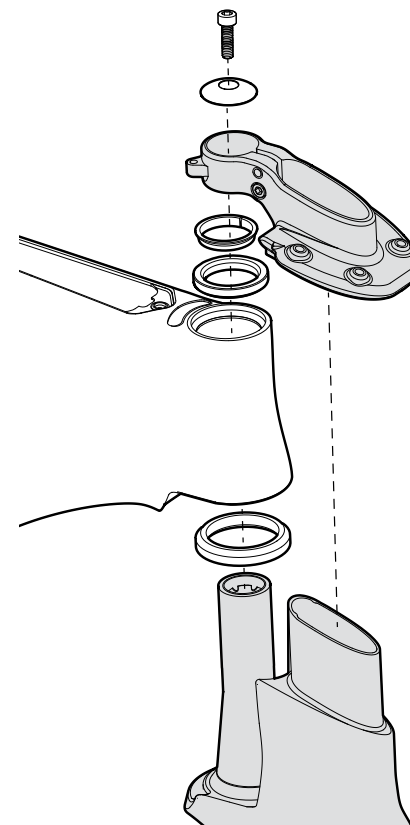


AEROBAR COMPONENTS OVERVIEW



P5X ASSEMBLY

FORK INSTALLATION

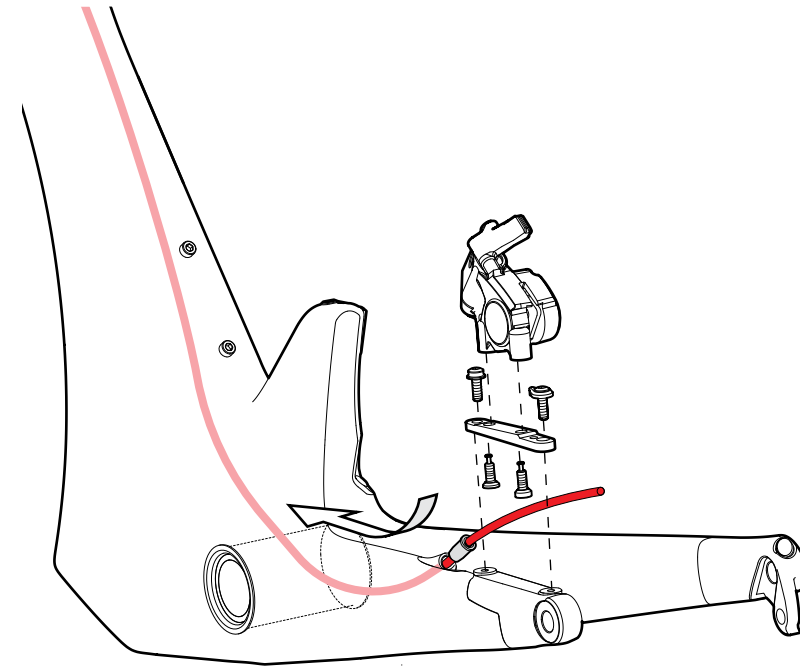
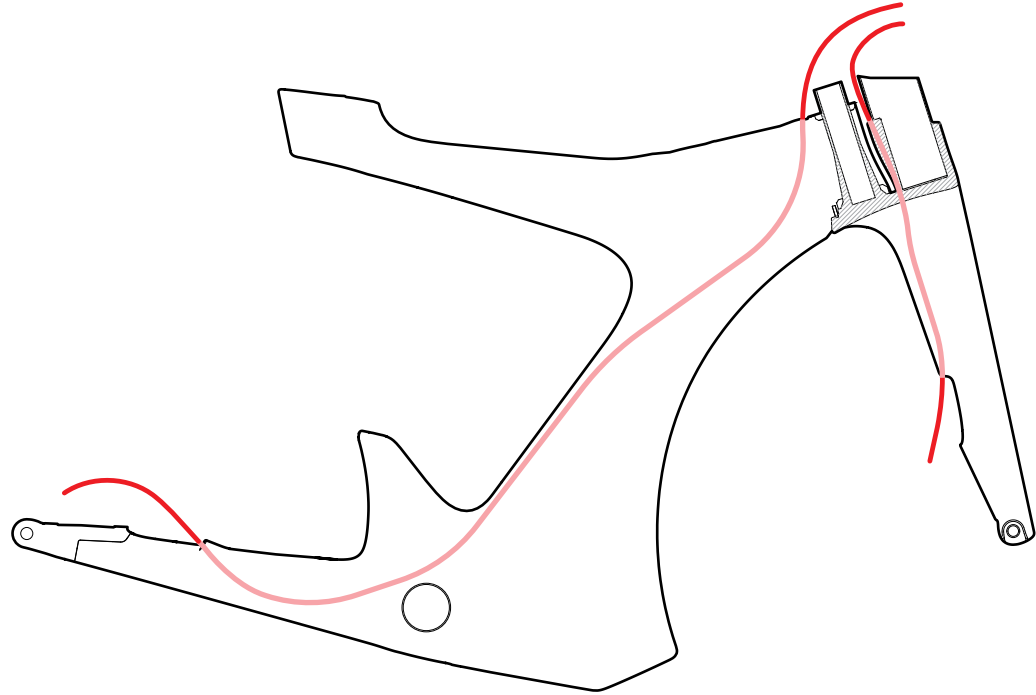


1. Check the stem, and headset components to make sure there are no sharp or rough edges on any of the surfaces which could cut or damage the steerer tube. If any rough edges are detected, have the components repaired (sharp edges removed) or replaced before proceeding.
2. Press the upper and lower headset bearings into the frame, and insert the fork into the head tube.
3. Slide the compression ring onto the steerer, and down until it fully seats in the top of the upper headset bearing. The split in the compression ring must be oriented toward to left or right side of the steerer – never towards the front or back.
4. Slide the stem onto the fork steerer oriented as shown. Note the stem must engage both the fork steerer and the external steerer. Do not use grease on the fork steerer.
5. Lightly grease the threads of the stem top cap bolt, and the stem clamp bolts.
6. Place the stem cap on top of the stem and insert the greased bolt through the cap to engage with the star nut. Tighten the bolt only enough to remove all play from the headset, and ensure that the fork still rotates freely.
7. Tighten the greased stem bolt(s) to the steerer using a torque wrench. Tighten the bolts evenly and alternately to a maximum of 5 Nm.*
8. As a final check ensure that the fork rotates freely in the head tube without any play or binding. If any problem is detected, loosen the bolts and perform steps 6) to 7) again.

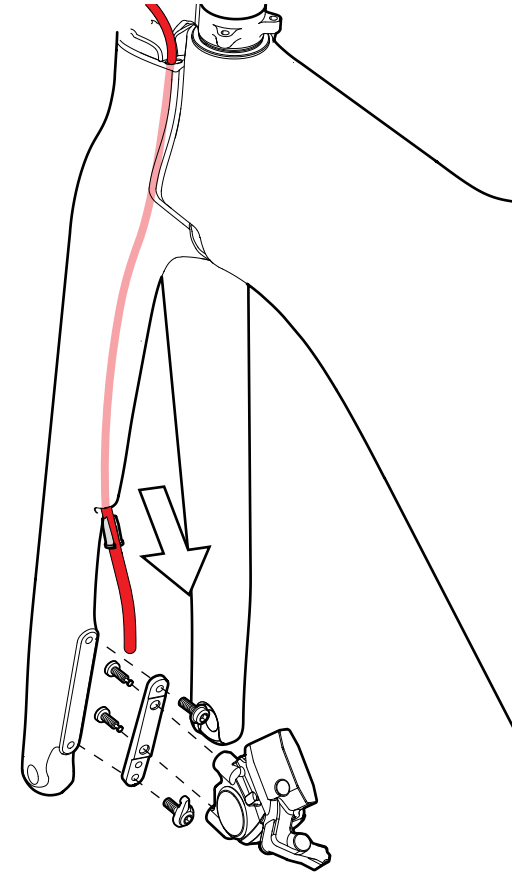
▲ *Do not exceed the maximum torque specification for the stem. Correct tightening force on fasteners – nuts, bolts, screws – on your bicycle is very important. Too little force, and the fastener may not hold securely. Too much force, and the fastener can strip threads, stretch, deform or break. Either way, incorrect tightening force can result in component failure, which can cause you to lose control and fall. In case of a disagreement or a conflict between any literature on recommended torque values, always use the recommended torque specification as printed on the component or recommended by the component manufacturer over any recommendation listed in this manual.

BRAKE HOUSING INSTALLATION

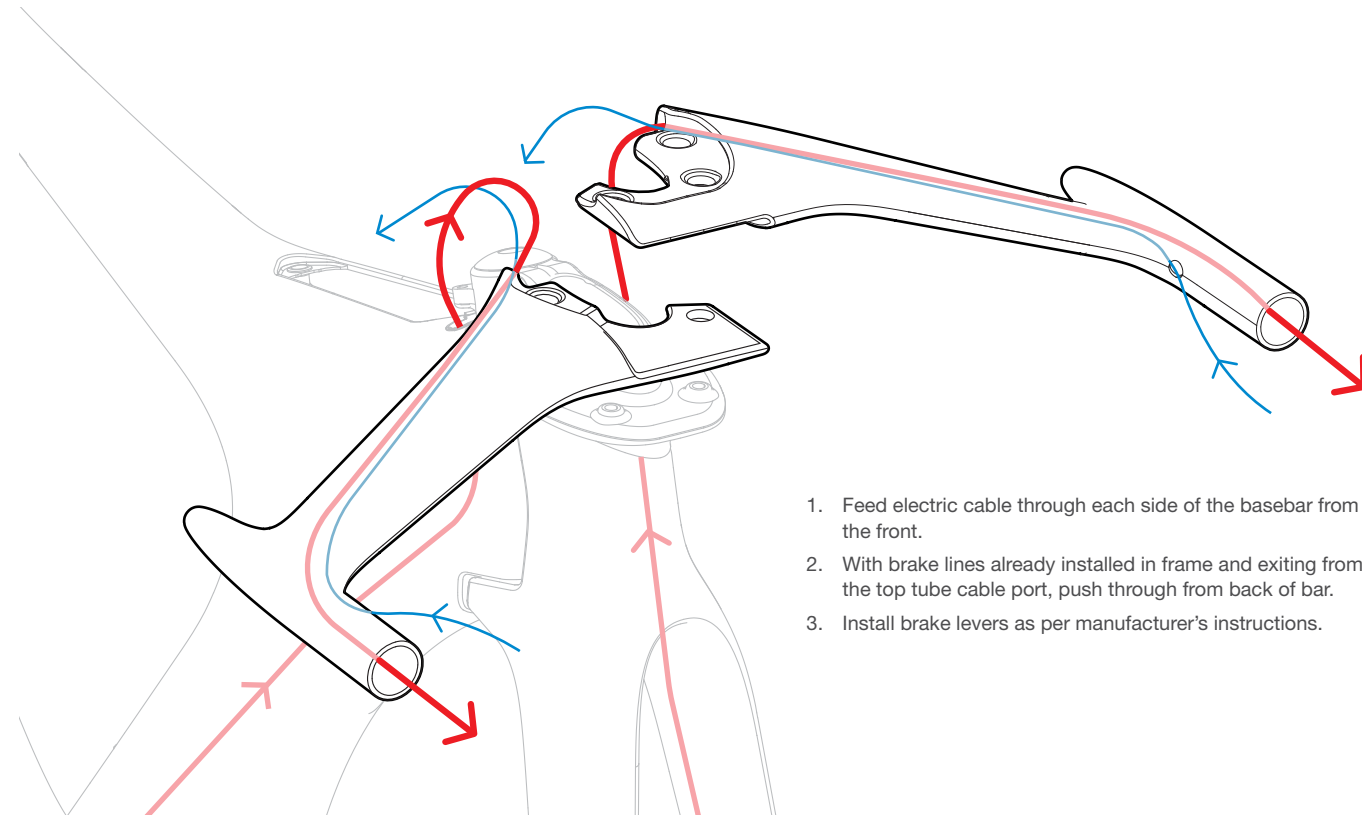
It is recommended that the hydraulic brake hoses or brake cable housing is installed first. These routing illustrations are intended as a supplement to the manufacturer's installation instructions only. For both hydraulic and mechanical disc brakes, please refer to the component manufacturer's service center or website for further information.



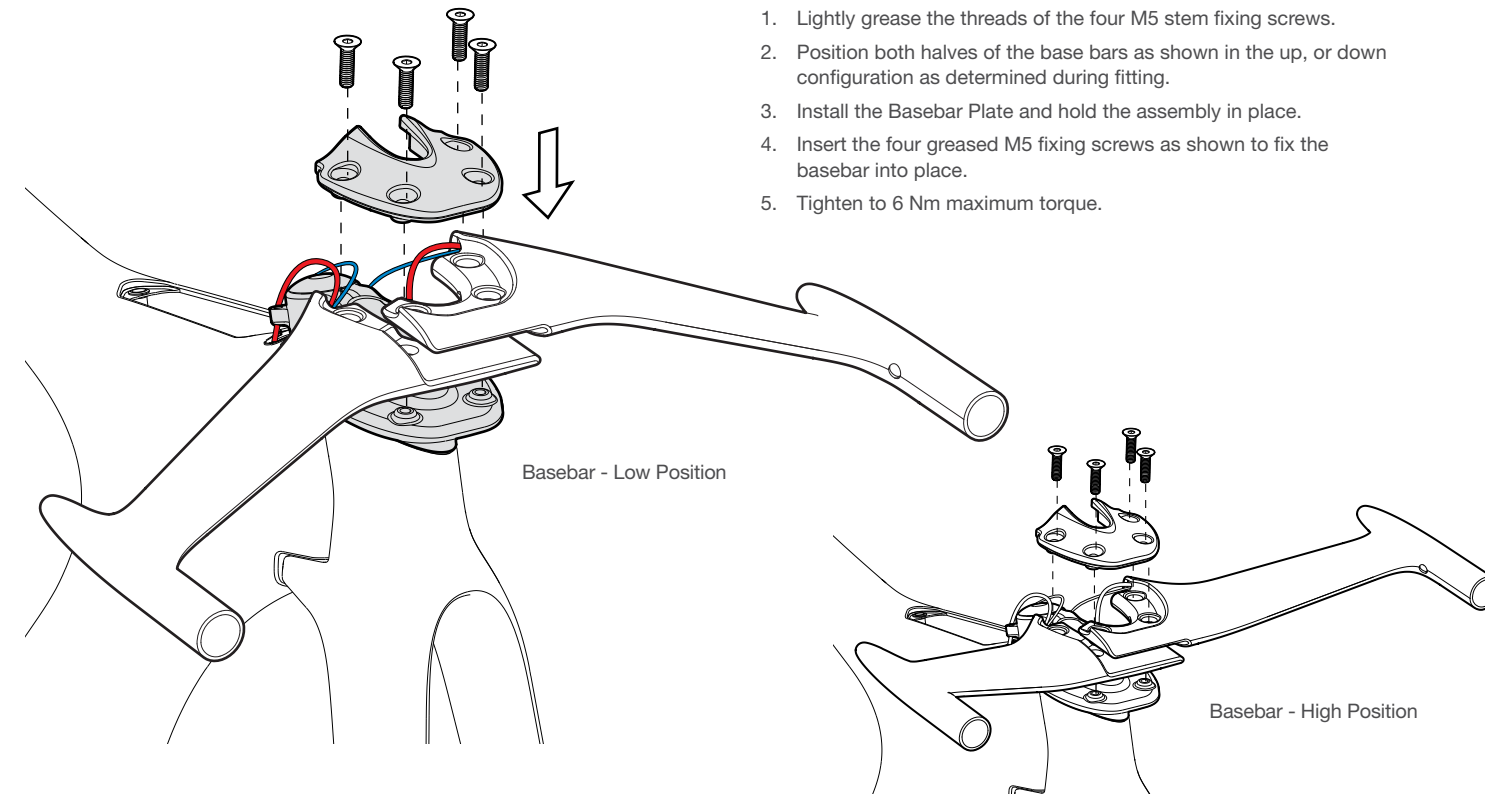
1. Route hydraulic brake hose or mechanical brake housing through the frame and fork.
2. Install calipers as per manufacturer's instructions.
3. Install Brake Hose Bushings to secure hose and housings in place.



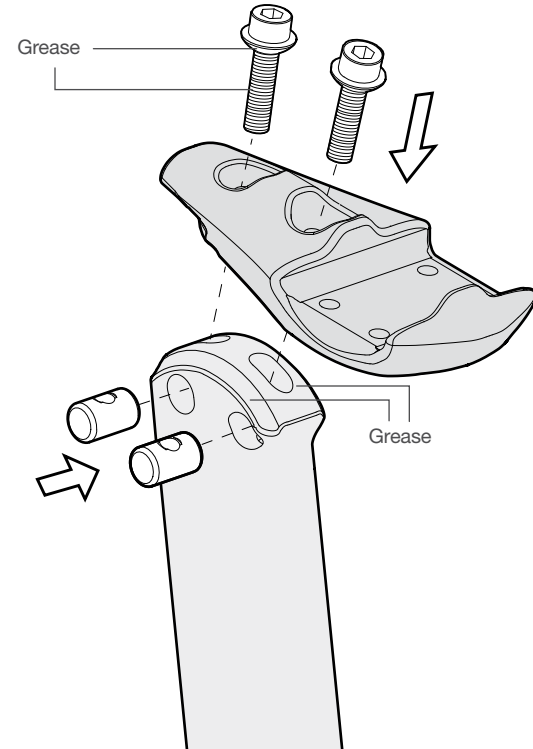
BASEBAR WIRING



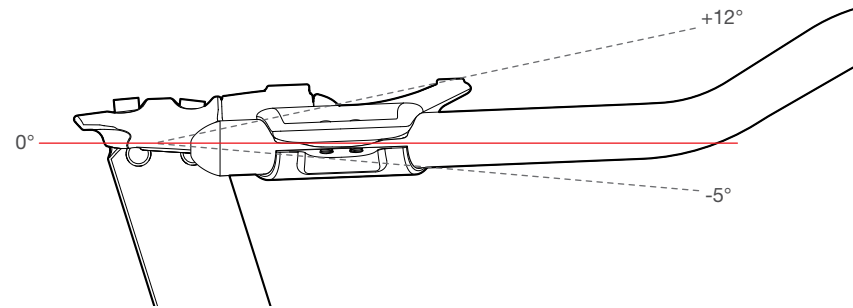
BASEBAR INSTALLATION



RISER ASSEMBLY



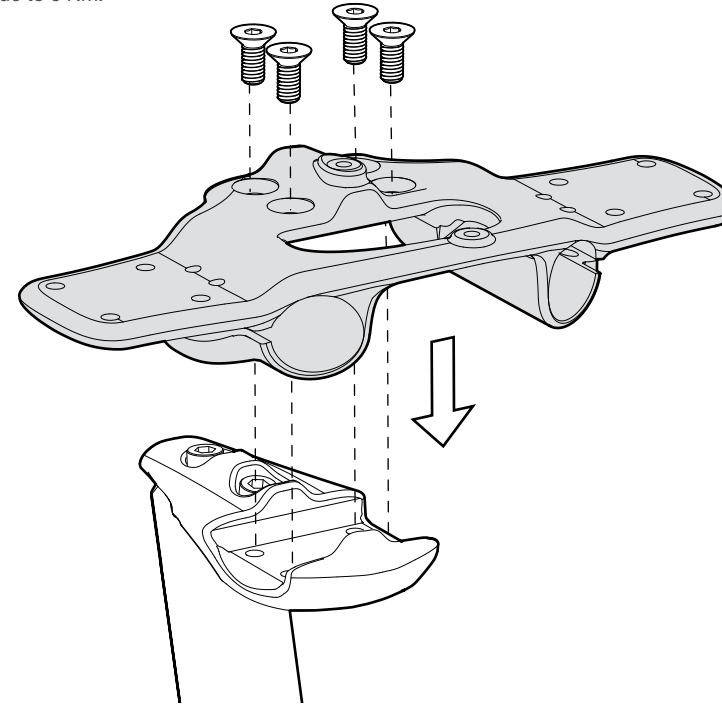
1. Lightly grease the threads and spherical washer faces of the two angle adjust plate fixing bolts.
2. Lightly grease the tilt interfacing surface on both the Stem Riser Post and the Angle Adjust Plate.
3. Assemble the Stem Riser Post components as depicted left.
4. Tighten to 6 Nm.



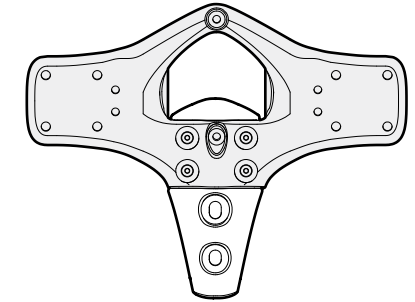
The riser assembly has +12/-5 degrees of tilt adjustment.

EXTENSION AND PAD MOUNT

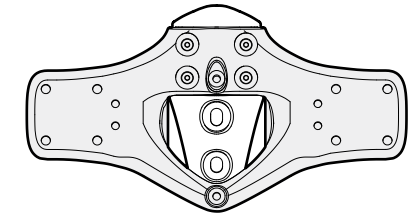
1. Attach Pad and Extension Mount to Angle Adjust Plate using four lightly greased M5 fixing screws.
2. Torque to 6 Nm.



The Pad and Extension Mount can be attached in two positions:



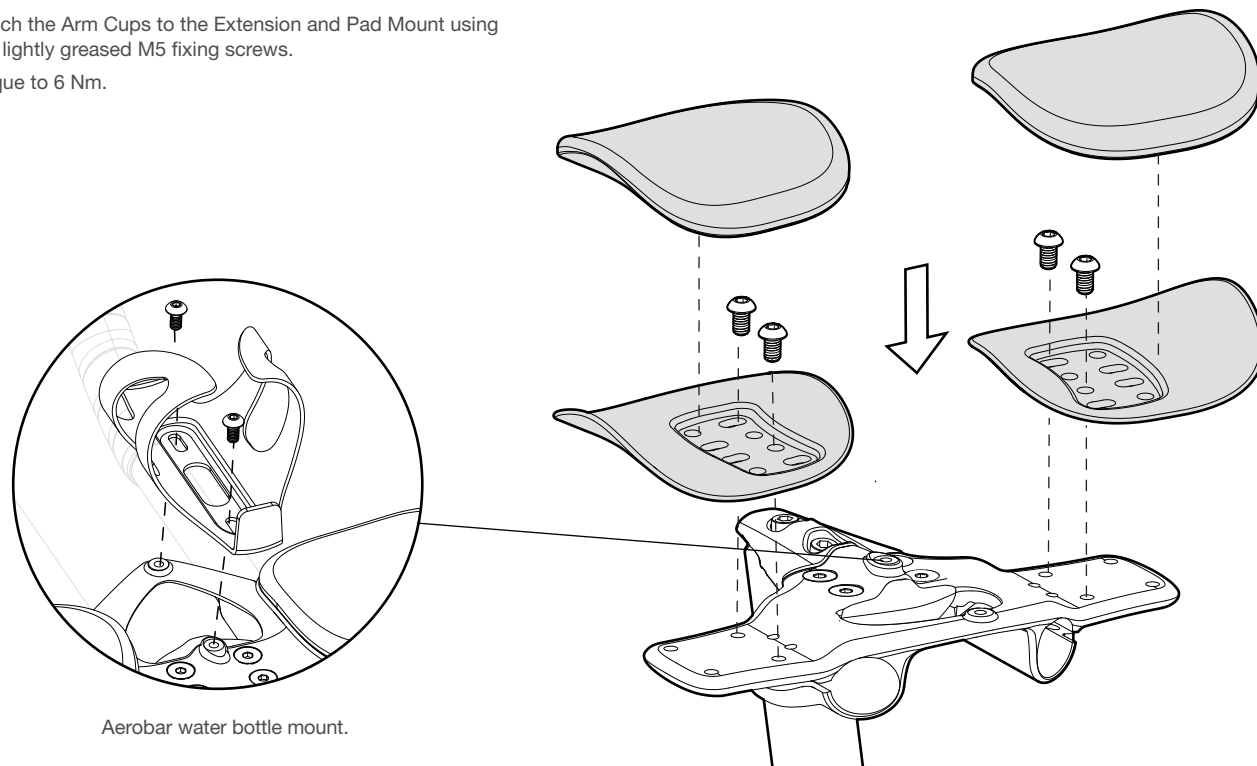
Forward Position



Setback Position

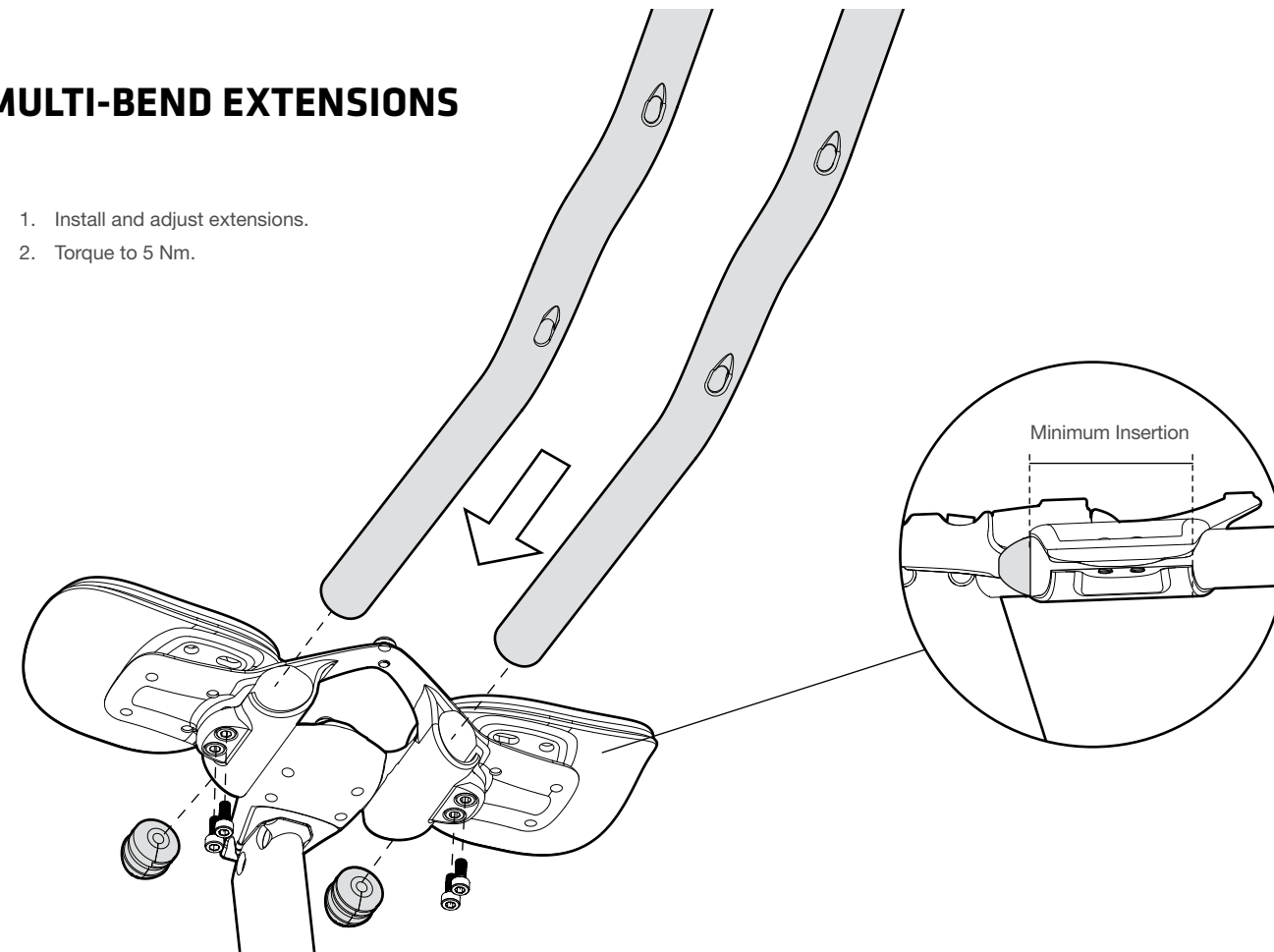
ARM CUP AND PAD INSTALLATION

1. Attach the Arm Cups to the Extension and Pad Mount using two lightly greased M5 fixing screws.
2. Torque to 6 Nm.

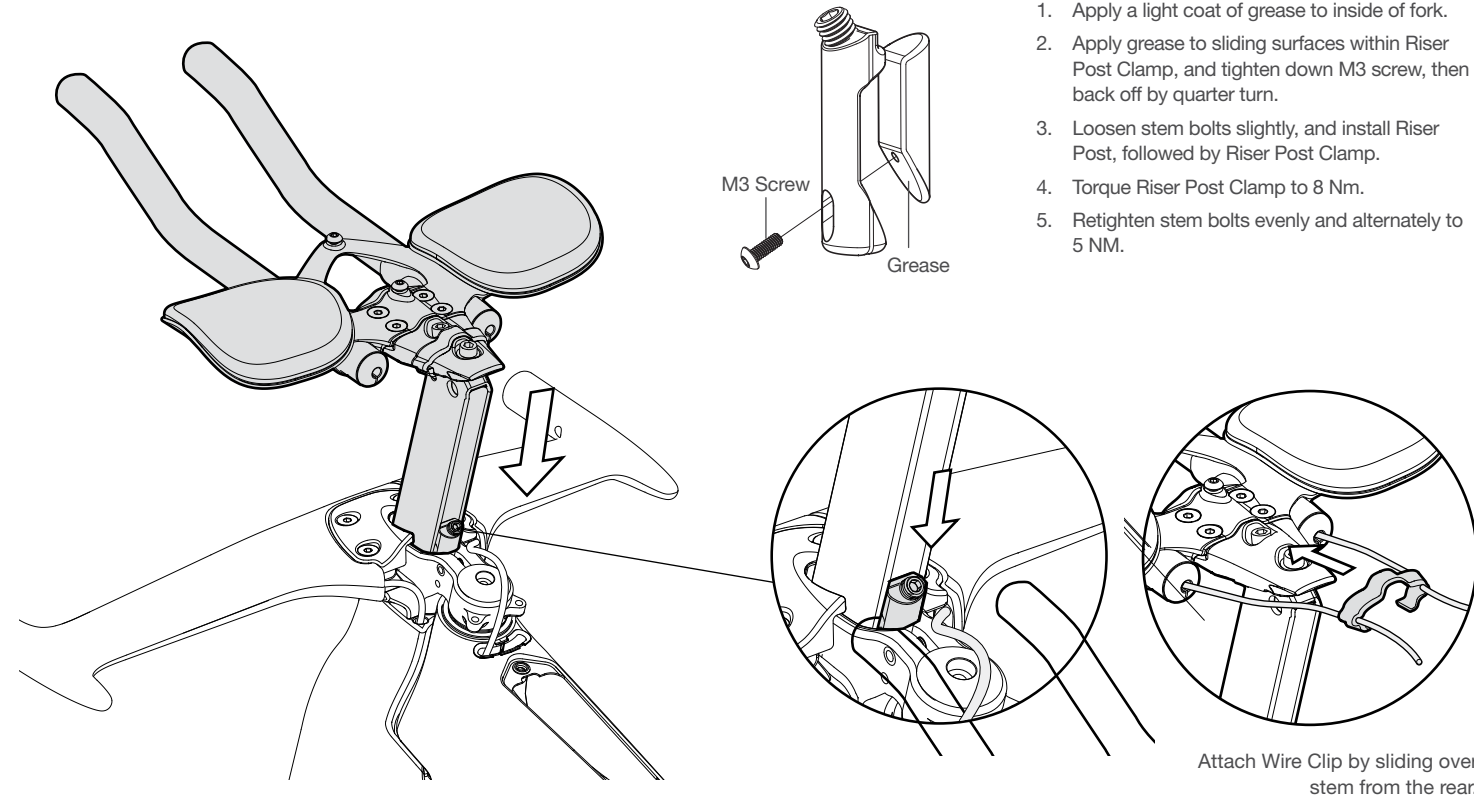


MULTI-BEND EXTENSIONS

1. Install and adjust extensions.
2. Torque to 5 Nm.

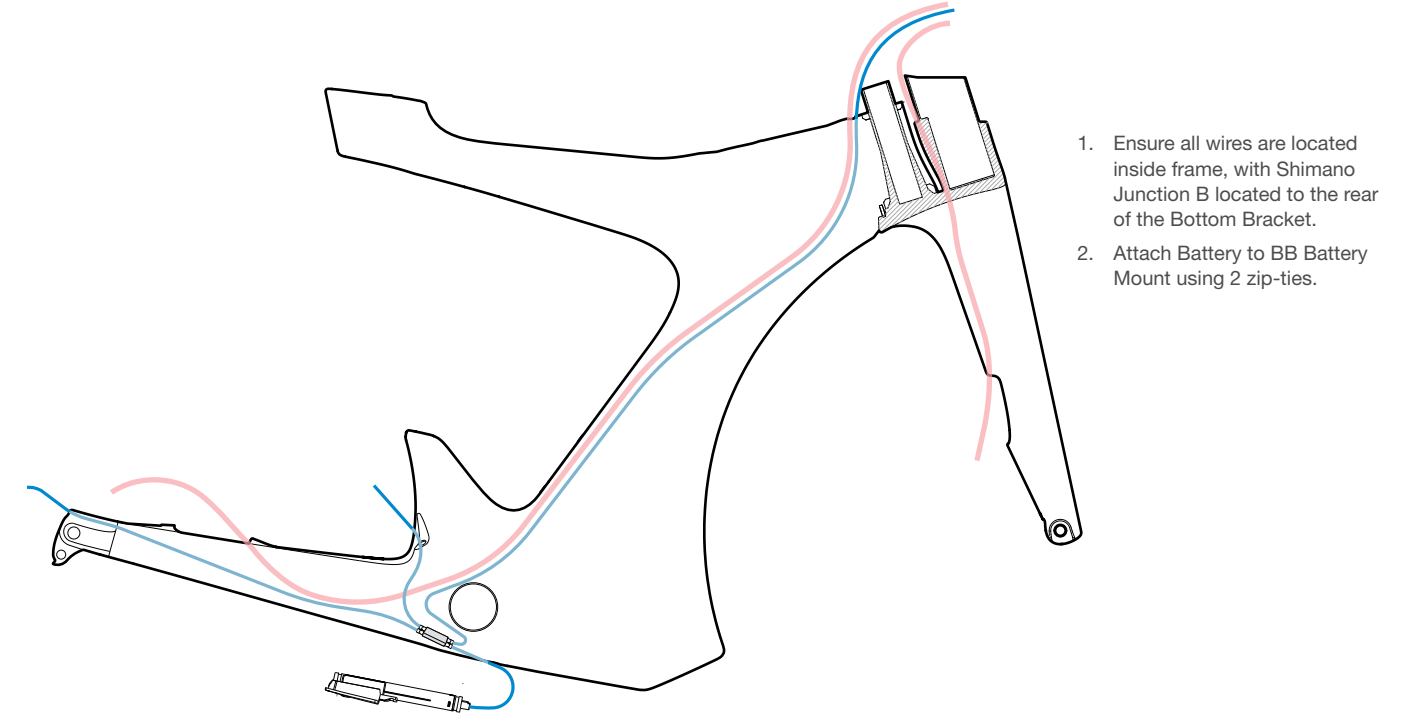


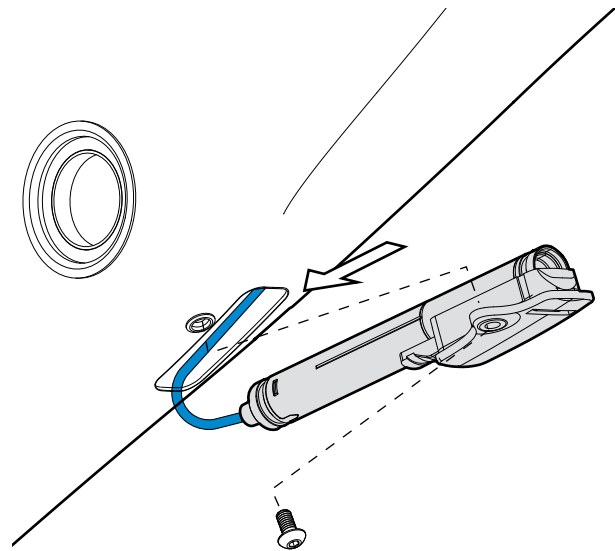
AEROBAR ASSEMBLY INSTALLATION



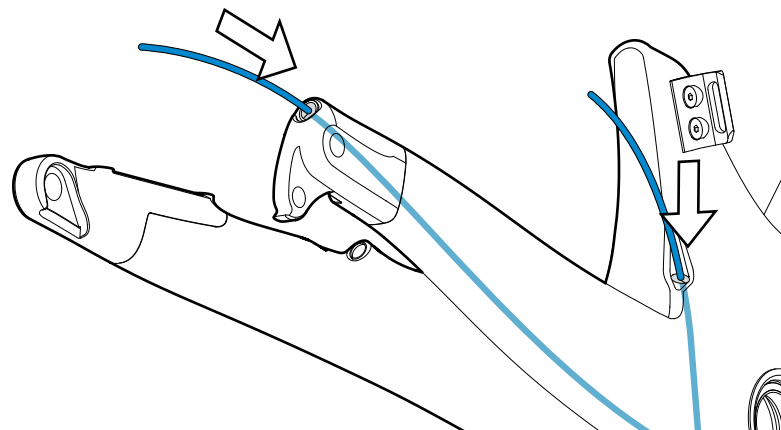
ELECTRIC CABLE ROUTING

It is recommended that electric cabling and junction points be installed after the brake hose has been installed. 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.



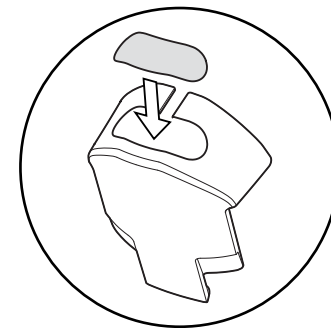


1. Attach wire to battery and install BB Battery Mount in Bottom Bracket cable port.
2. Secure using the included fixing screw.
3. Torque to 1 Nm.

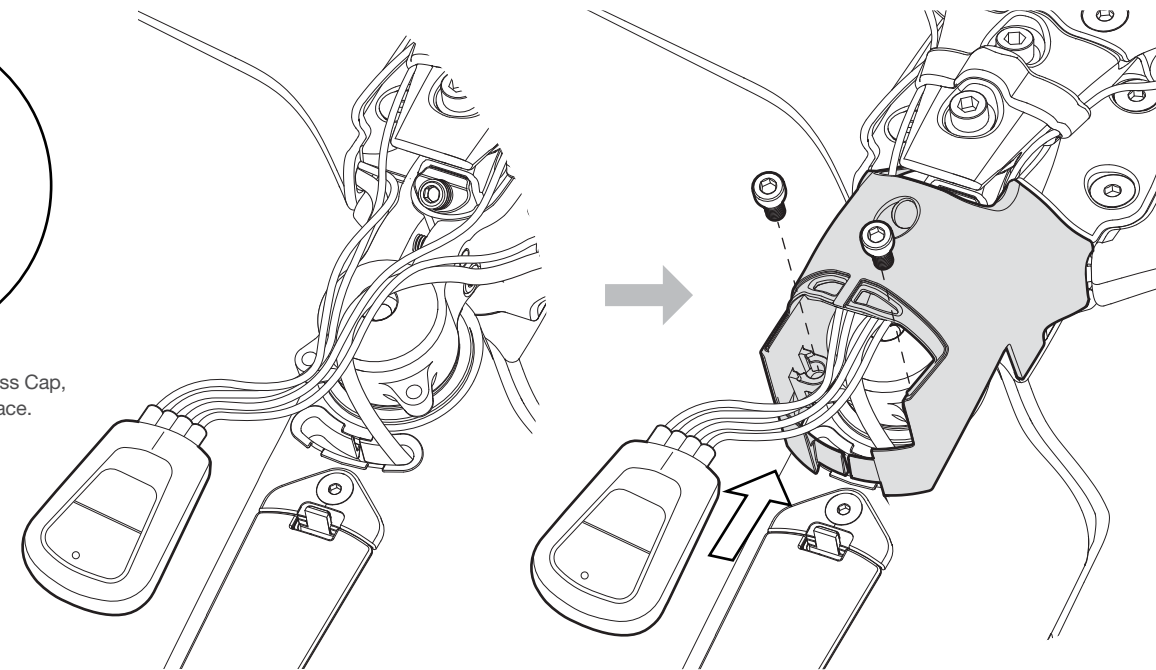


Finish by installing the E-Wire Grommet Open Type to secure the wires.

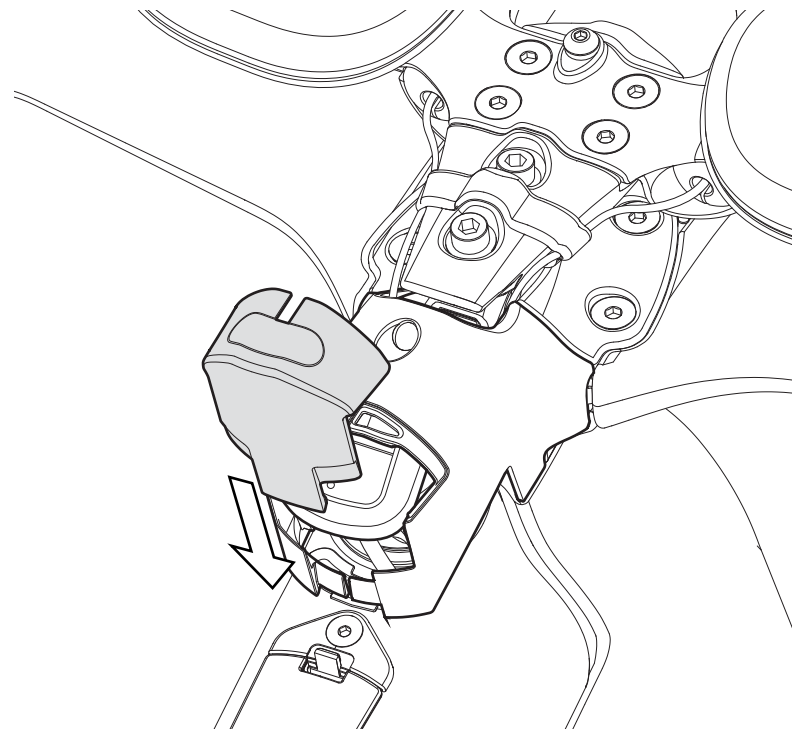
STEM COVER INSTALLATION



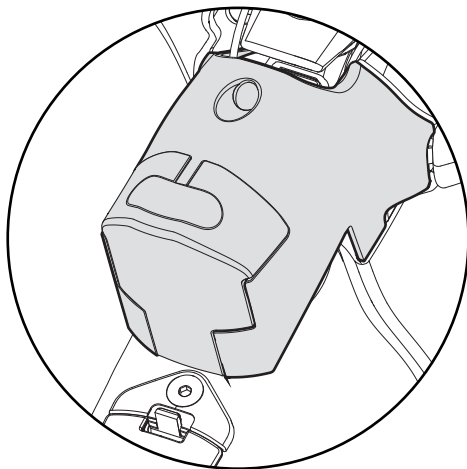
Assemble Stem Cover Access Cap, by snapping window into place.



1. Fix the Stem Cover to stem using the two supplied lightly greased M4 bolts.
2. Torque to 1 Nm.

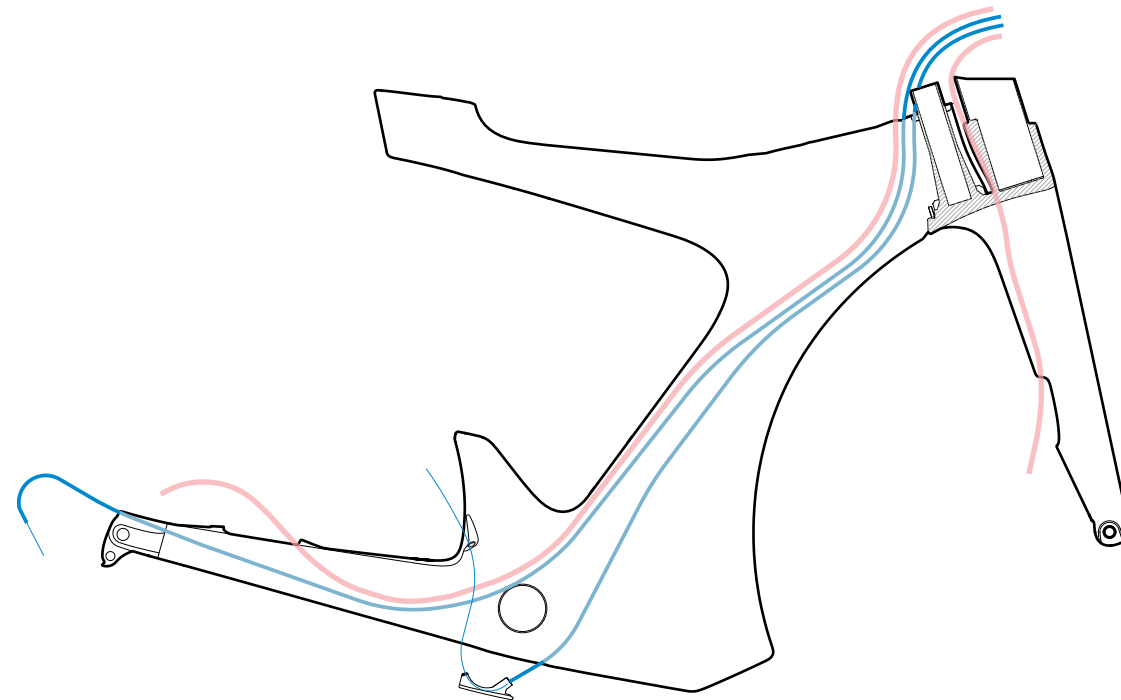


Fit excess electric cable and Di2 Junction A or SRAM BlipBox inside stem cover, positioning LEDs at lens. Slide end cap down to snap into place.



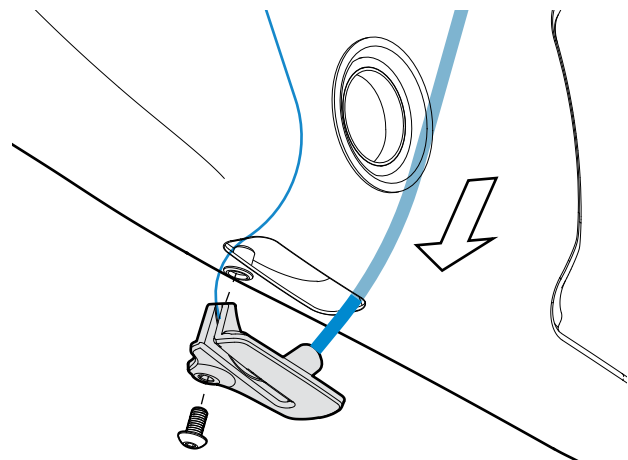
MECHANICAL CABLE ROUTING

It is recommended that front and rear derailleur cables be installed after the brake hose has been installed. 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.

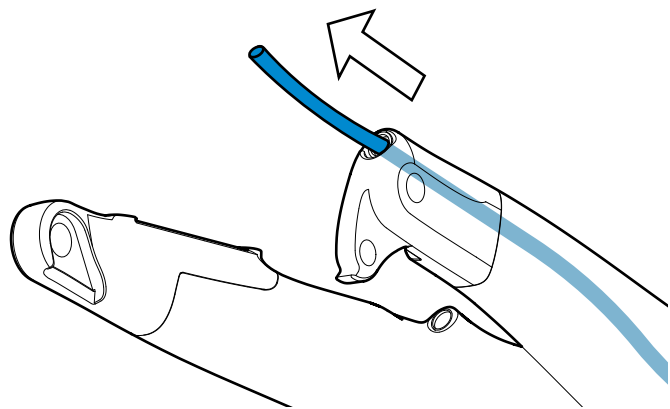


With the brake hose already in place, install shifter cable housing.

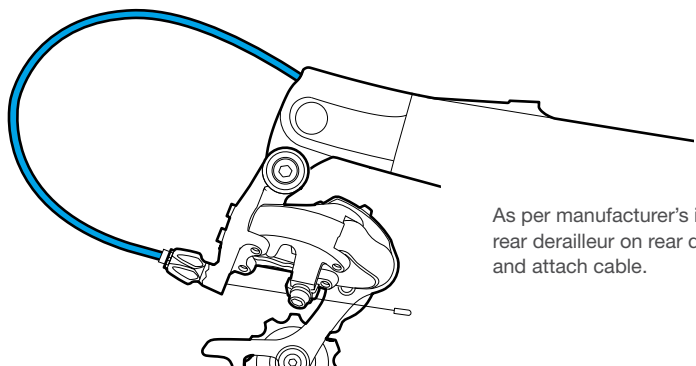
The cable housing runs internally from the aerobar extensions to the bottom bracket for the front and directly to the rear derailleur on the back.



1. Route front shifter housing to the bottom bracket cable guide.
2. Route shifter cable around the guide, and through the front derailleur wire exit hole.
3. Torque to 1 Nm.

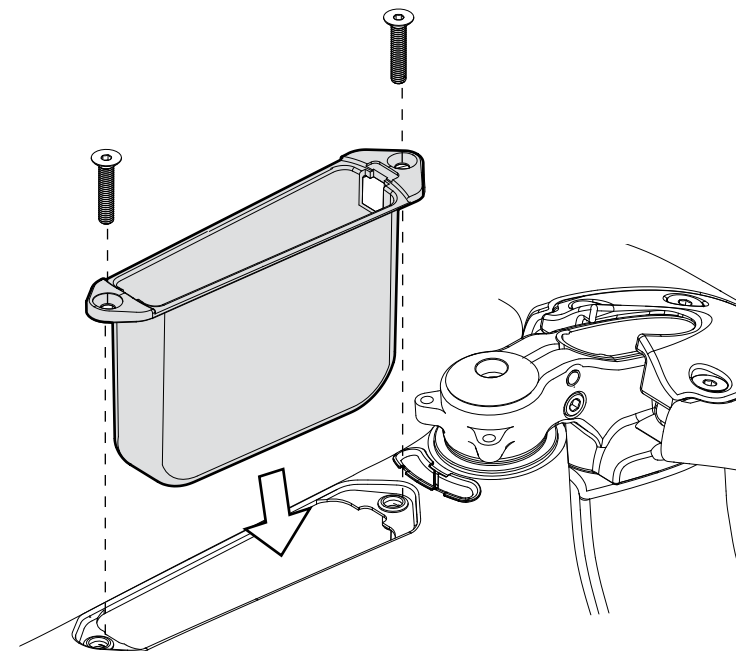


Route rear shifter housing through port on rear dropout.

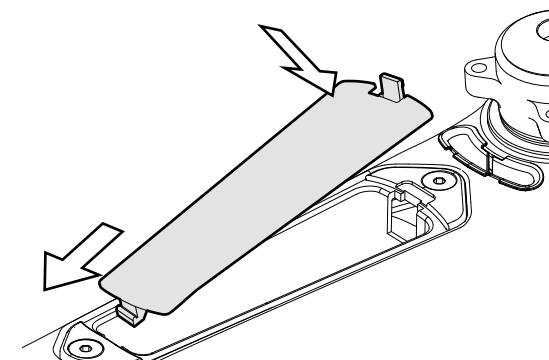


As per manufacturer's instructions, install rear derailleur on rear derailleur hanger, and attach cable.

SMARTPAK INSTALLATION: USING TRAY WITHOUT SMARTPAK

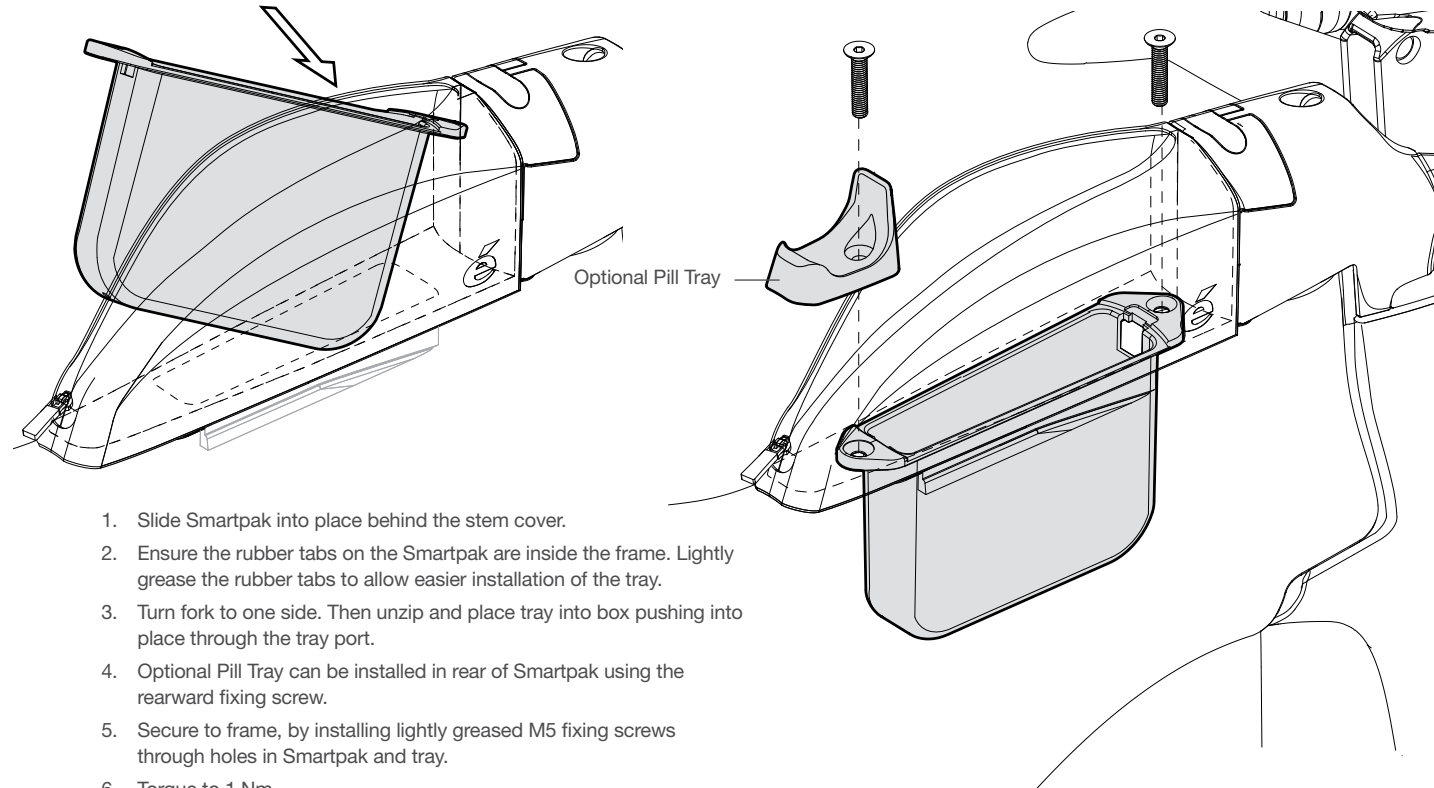


1. If using tray without Smartpak, use supplied M5 fixing screws to mount to frame.
2. Torque to 1 Nm.



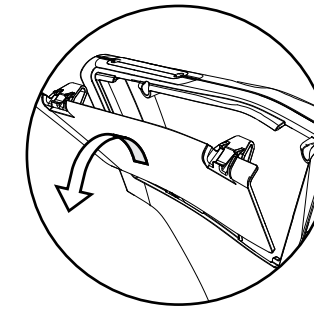
To attach cover to tray, slide in the back edge and press down at the front to click shut.

SMARTPAK INSTALLATION: USING TRAY WITH SMARTPAK

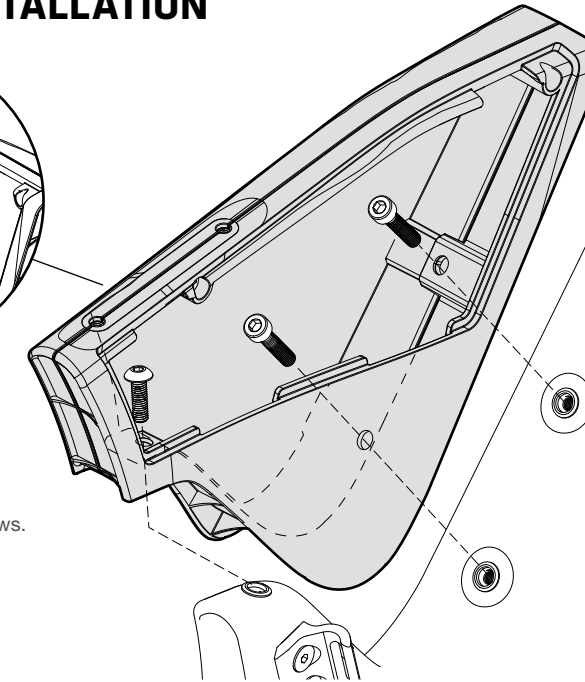


1. Slide Smartpak into place behind the stem cover.
2. Ensure the rubber tabs on the Smartpak are inside the frame. Lightly grease the rubber tabs to allow easier installation of the tray.
3. Turn fork to one side. Then unzip and place tray into box pushing into place through the tray port.
4. Optional Pill Tray can be installed in rear of Smartpak using the rearward fixing screw.
5. Secure to frame, by installing lightly greased M5 fixing screws through holes in Smartpak and tray.
6. Torque to 1 Nm.

SPEEDCASE INSTALLATION



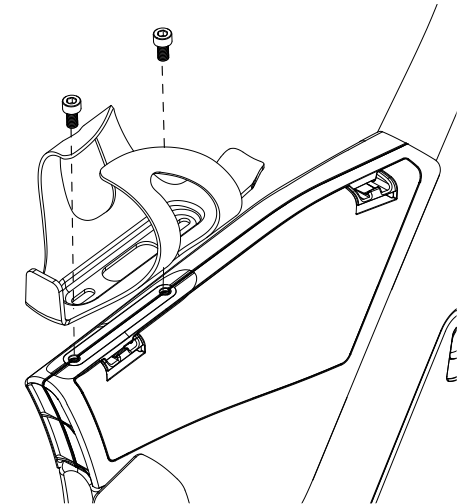
1. Remove the drive side door.
2. Secure the Speedcase to the frame using three lightly greased M5 bolts fixing screws.
3. Torque to 2-3 Nm.



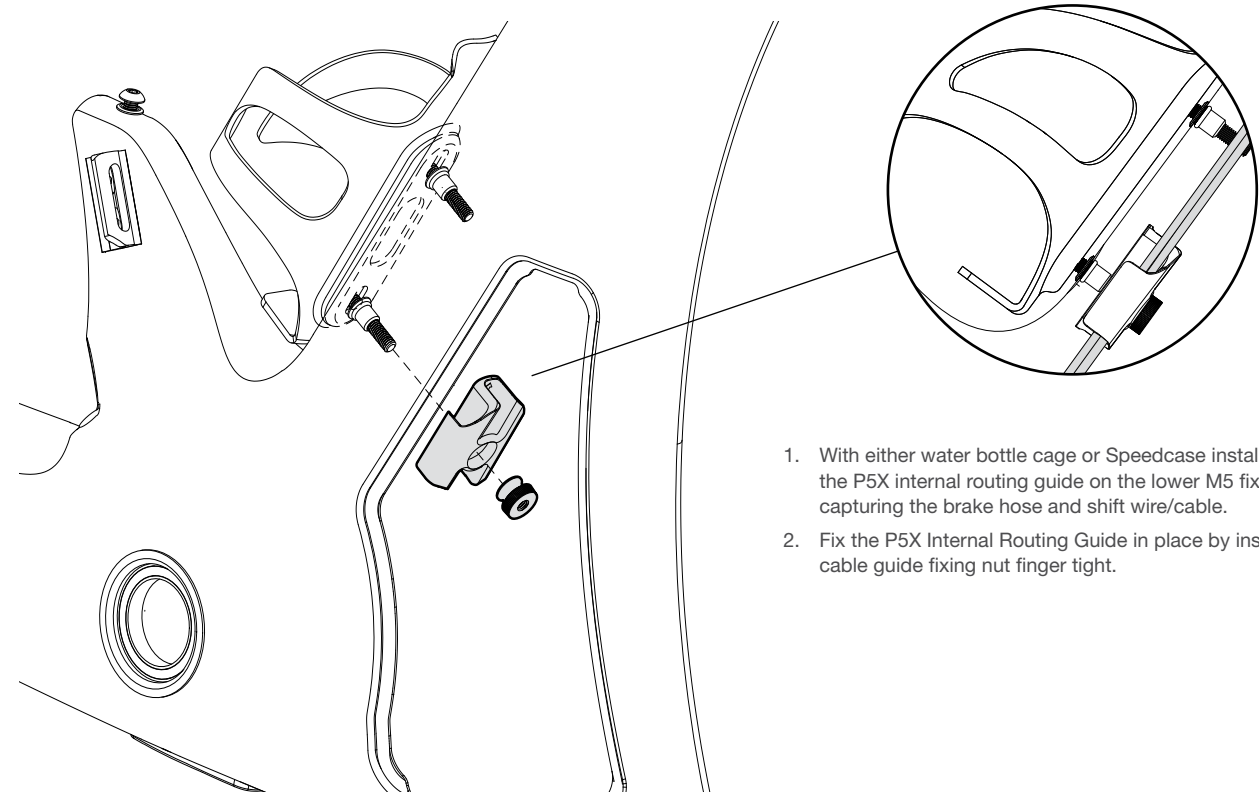
▲ Attempting to open Speedcase while riding may result in loss of control and serious injury.

▲ Ensure that Speedcase door latches are fully engaged before riding. Failing to do so may result in interference with the pedaling action, and potentially cause loss of control and serious injury.

1. A water bottle cage can be attached to the Speedcase using M5 fixing screws.
2. Torque to 1-2 Nm.

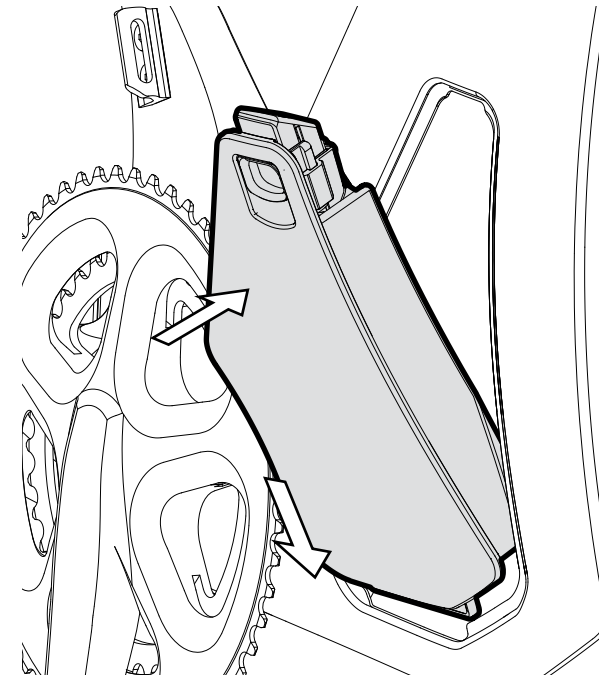


INTERNAL ROUTING GUIDE INSTALLATION

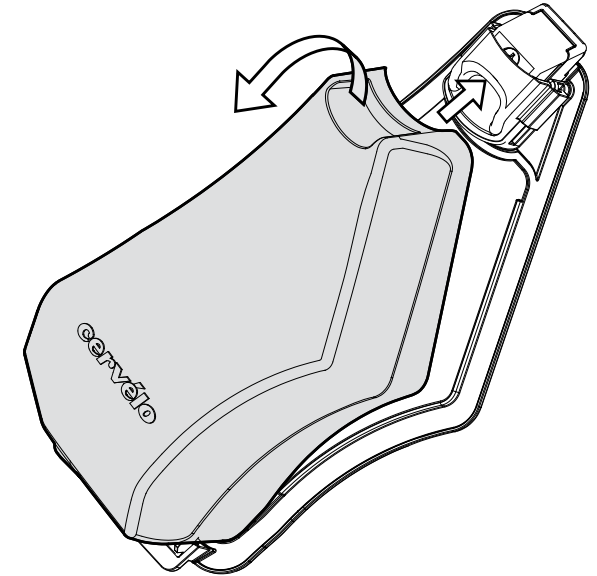


1. With either water bottle cage or Speedcase installed, locate the P5X internal routing guide on the lower M5 fixing screw, capturing the brake hose and shift wire/cable.
2. Fix the P5X Internal Routing Guide in place by installing cable guide fixing nut finger tight.

STEALTHBOX INSTALLATION



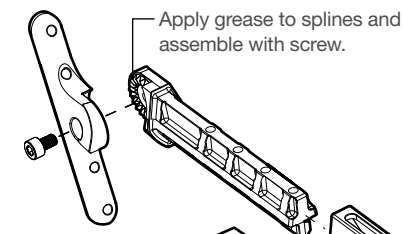
To install Stealthbox, insert the bottom edge into the frame at an angle and pivot up while pressing down on the latch. Once flush with the frame, release latch to secure.



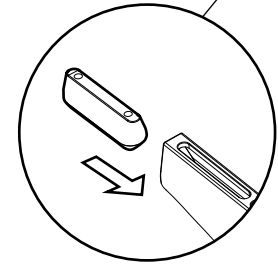
To open Stealthbox push up on latch on the rear of the box and pull back box from the top edge.

- ▲ Attempting to open Stealthbox while riding may result in loss of control and serious injury.
- ▲ Ensure that Stealthbox door latches are fully engaged before riding. Failing to do so may result in interference with the pedaling action, and potentially cause loss of control and serious injury.

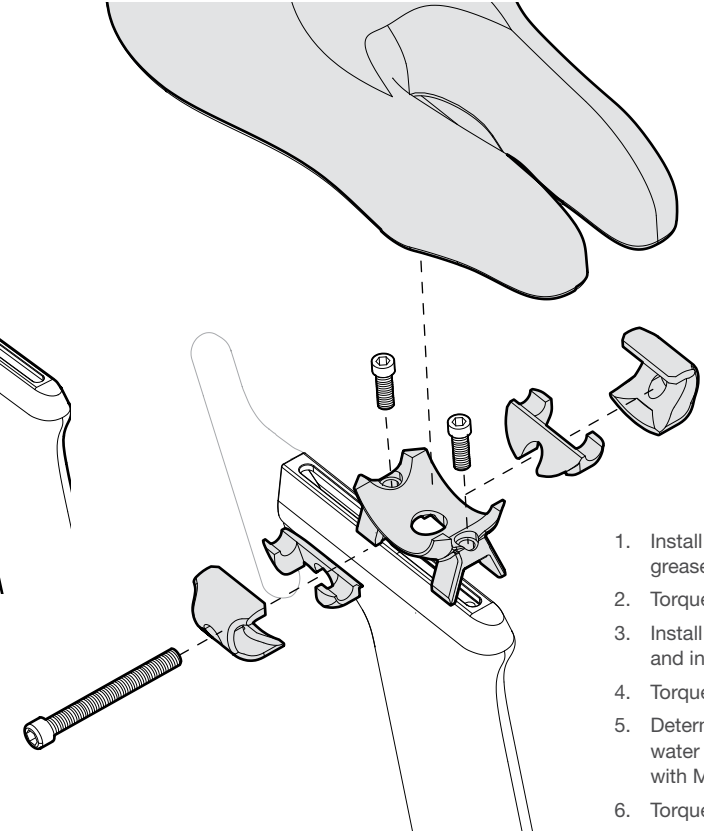
SEAT POST ASSEMBLY



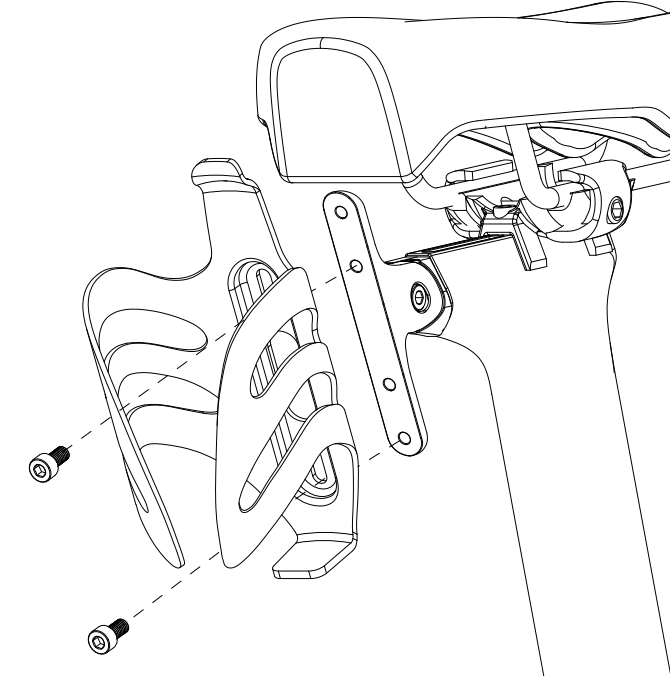
Slide the lightly greased seat post bottle cage slug, into the seat post.



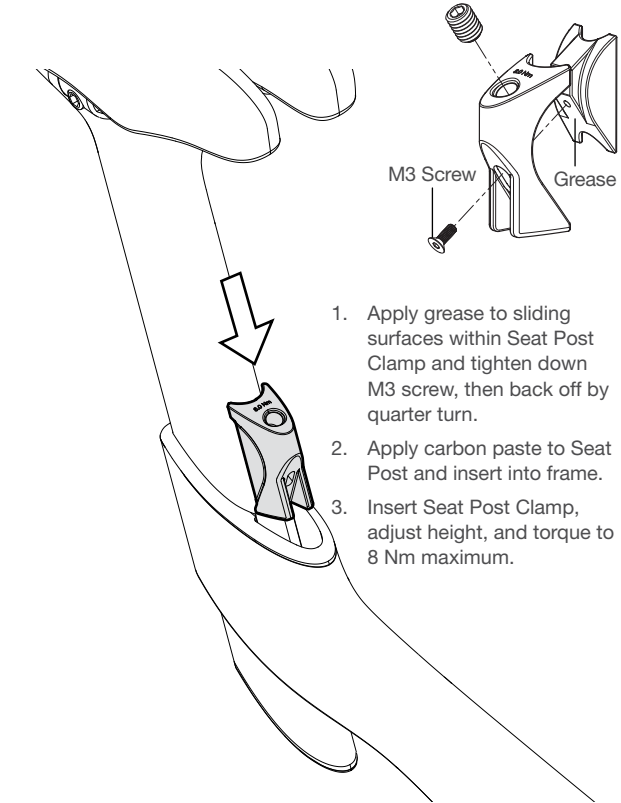
If not using the bottle cage attachment, use the alternate seat post slug.



1. Install saddle mount using lightly greased M5 fixing bolts.
2. Torque to 6-7 Nm.
3. Install lightly greased rail binder bolt, and install saddle.
4. Torque to 12 Nm.
5. Determine desired angle, and attach water bottle mount to seat post slug with M5 fixing screw.
6. Torque to 4 Nm.

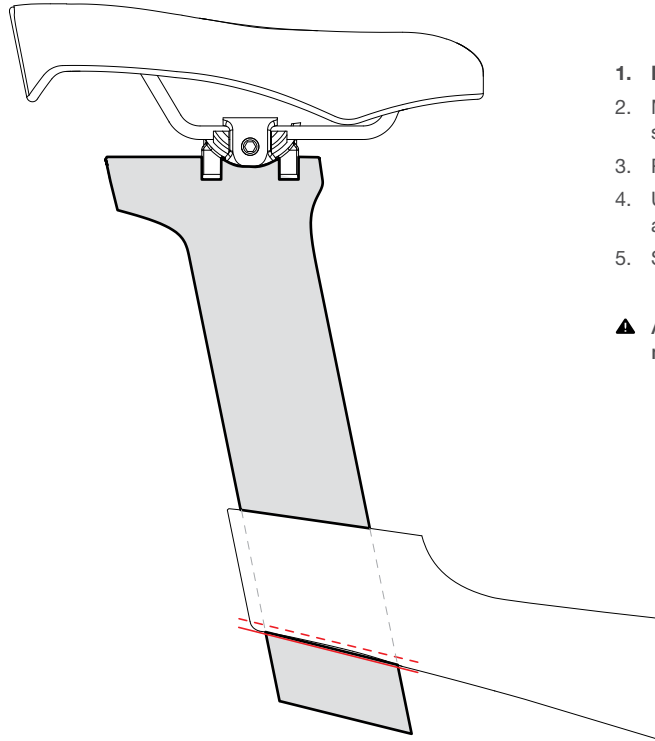


1. Attach water bottle cage using lightly greased M4 fixing screws.
2. Torque to 2-3 Nm.



1. Apply grease to sliding surfaces within Seat Post Clamp and tighten down M3 screw, then back off by quarter turn.
2. Apply carbon paste to Seat Post and insert into frame.
3. Insert Seat Post Clamp, adjust height, and torque to 8 Nm maximum.

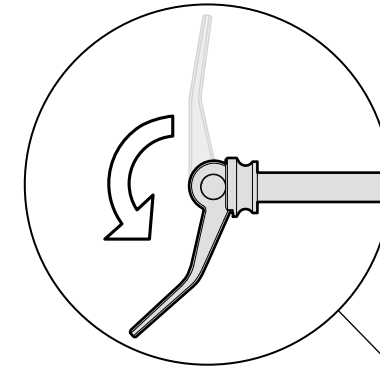
CUTTING SEAT POST



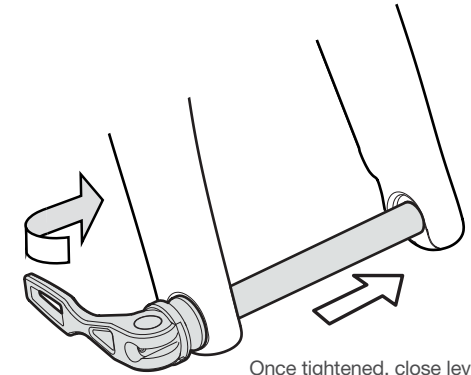
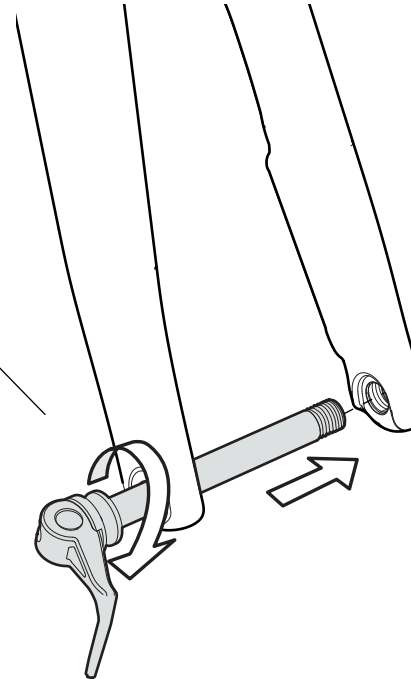
1. **ENSURE THAT FINAL SADDLE HEIGHT IS CONFIRMED AND TESTED.**
2. Mark the seat post cutting line, by tracing the lower edge of the seat tube on the seat post.
3. Remove the seat post.
4. Using a saw with carbon-specific blade, trim excess seat post no more than 5mm above marked line.
5. Sand and clean cut surface, and reinstall.

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

THROUGH-AXLE WHEEL INSTALLATION



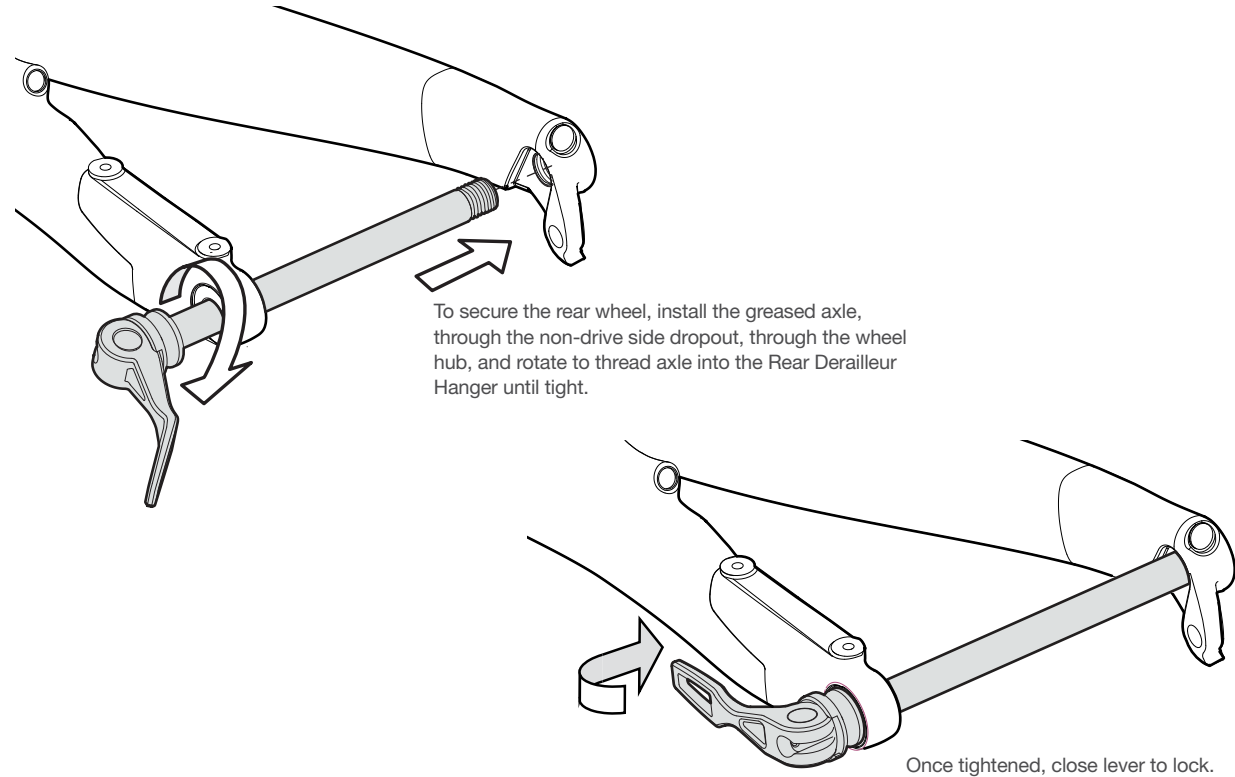
Put axle lever in open position.



Once tightened, close lever to lock.

To secure the front wheel, install the greased axle, through the drive side drop out, through the wheel hub, and rotate to thread axle into opposite fork drop out until tight.

- ▲ If using an aftermarket wheelset, please refer to the component manufacturer's service center or website for further information.
- ▲ Adjust brakes as per manufacturer's instructions.
- ▲ Adjust shifting as per manufacturer's instructions.



APPENDIX: P5X FORK OWNER'S INSTRUCTIONS

1. IMPORTANT CUSTOMER INFORMATION

WARNING: Carbon bicycle forks are subject to wear and stress during their lifetime. If the fork's useful life is exceeded, it can suddenly and catastrophically fail, potentially causing serious injury or death to the rider. Scratches, cracks, fraying, and discoloration are signs of stress-caused fatigue and indicate that the fork is at the end of its useful life and needs to be replaced. While the materials and workmanship of your fork are covered by warranty, this is no guarantee that the fork will last the full term of the warranty. Product life is often related to the kind of riding you do and to the treatment to which you submit the bicycle & fork. The fork's warranty is not meant to suggest that the fork cannot be broken or will last forever - it only means that the fork is covered subject to the terms of the warranty. For warranty details please visit www.cervelo.com. For information relating to product life please consult with your dealer.

2. INTENDED USE

- Cervélo forks are designed and built for road riding, racing, and time-trialing. They are intended to be used for rides on smooth surfaces such as paved roads. While riding, take care to avoid pot holes, sewer grating, railroad tracks, expansion joints, road or sidewalk construction, debris and other obstructions that could catch your wheel front wheel and cause a severe impact to the fork.
- Cervélo forks are not designed for use on rough or loose off-road surfaces, or for stunts, jumping, or other aggressive riding. These unintended actions can put huge and unpredictable stress on the fork, and risks serious damage to both the fork as well as to the rider.

WARNING: Frequent inspection of your fork is important for your safety. Perform an inspection of the fork and bicycle before every ride. Periodic, more detailed inspection of your bicycle is also important. How often this more detailed inspection is needed depends upon you. Because your dealer cannot track your use, you must take responsibility for periodically bringing your bike to your dealer for inspection and service. Your dealer will help you decide what frequency of inspection and service is appropriate for how and where you use your bike.

NOTE: See also Care & Maintenance for details on how to identify damaged parts.

For your safety and understanding, please read these instructions in their entirety. Ignoring these WARNINGS can lead to fork failure, which can result in serious injury or death. Cervélo cannot accept any liability in the event of failure to comply with the instructions in this manual.

3. ASSEMBLY

WARNING: Improper fork installation could cause a failure that results in severe injury or death.

1. Check the stem and headset components to make sure there are no sharp or rough edges on any of the surfaces which could cut or damage the steerer tube (inner or external). If any rough edges are detected, have the components repaired (sharp edges removed) or replaced before proceeding.
2. Press the upper and lower headset bearings into the frame, and insert the fork inner steerer into the head tube.
3. Slide the compression ring onto the inner steerer, and down until it fully seats in the top of the upper headset bearing. The split in the compression ring must be oriented toward to left or right side of the steerer – never towards the front or back.
4. Slide the stem onto the fork steerer (inner and external). Do not use grease on the fork steerers. The use of Tacx Carbon Assembly Compound™ or equivalent friction paste is recommended to help secure the stem. This increases friction thus allowing for the tightening torque to be lower.
5. Lightly grease the threads of the stem top cap bolt, and the stem clamp bolts.
6. Place the stem cap on top of the stem and insert the greased bolt through the cap to engage with the star nut. Tighten the bolt only enough to remove all play from the headset, and ensure that the fork still rotates freely.

WARNING: To avoid damaging the fork, never try to align the stem without first fully loosening the stem's steerer clamp bolts.

7. Tighten the greased stem bolt(s) to the steerer using a torque wrench. Tighten the bolts to a maximum of 5 Nm

WARNING: Do not exceed the maximum torque specification for the stem. Correct tightening force on fasteners – nuts, bolts, screws – on your bicycle is very important. Too little force, and the fastener may not hold securely. Too much force, and the fastener can strip threads, stretch, deform or break. Either way, incorrect tightening force can result in component failure, which can cause you to lose control and fall. In case of a disagreement or a conflict between any literatures on recommended torque values, always use the recommended torque specification as printed on the component or recommended by the component manufacturer over any recommendation listed in this manual.

8. As a final check ensure that the fork rotates freely in the head tube without any play or binding. If any problem is detected, loosen the bolts and perform steps 6 to 7 again.
9. For brake installation, please follow the instructions as provided by the brake manufacturer, and also refer to this P5X Owner's Manual.

4. CARE & MAINTENANCE

All riders must understand the fundamental realities of composites:

- Composite materials constructed of carbon fibers are strong and light, but when crashed or overloaded, carbon fibers do not bend, they break.
- At and near the break, there will be rough, sharp edges and possibly delamination of carbon fiber or carbon fiber fabric layers. There will be no bending, buckling, or stretching.
- Repeated loading of the fork during use can also create fatigue damage over time. Proper inspection of the fork is critical to ensure your safety while riding.

Before each ride:

- Squeeze the front brake and rock the bike forward and back. Does everything feel solid? If you feel or hear knocking with each forward or backward movement of the bike, you probably have a loose headset. Readjust the headset as per the Assembly instructions above or have your dealer check it.
- Lift the front wheel off the ground and swing it from side to side. Does it feel smooth? If you feel any binding or roughness in the steering, you may have a tight headset. Readjust the headset as per the instructions above or have your dealer check it.
- Check the fork for any deep scratches, cracks or discoloration. These are signs of stress-caused fatigue and indicate that it is at the end of its useful life and needs to be replaced.
- Check the alignment of the front wheel within the fork to ensure no parts are rubbing. Readjust the wheel position if necessary.

During each ride:

- Stop and immediately investigate any new or changes in sound (squeaking/rattling), or feel (soft feel/vibration/flexibility) occurring in the area of the handlebars, stem, fork, or front wheel. Do not ride the bicycle until the cause has been identified and properly resolved.

After a crash or significant impact:

- First, check yourself for injuries, and take care of them as best you can. Seek medical help if necessary.
- Next, check your fork for damage on the spot. Do not ride if any problems with the fork are detected. Bring the fork to your dealer for professional inspection.
- Following any significant impact, take your bike to your dealer for a thorough check. The entire fork must be inspected for damage – this requires fully removing the fork from the frame to check all surfaces for cracks or other signs of damage. Replace the fork if any problems are detected.

WARNING: A crash or other impact can put extraordinary stress on a bicycle fork, causing it to fail or to fatigue prematurely. Components suffering from stress fatigue can fail suddenly and catastrophically, causing loss of control, serious injury or death.

WARNING: If the fork sustains a significant impact, the entire fork must be inspected for damage – remove the fork fully from the frame to check all surfaces.

5. INSPECTION OF COMPOSITE FRAME, FORK, AND COMPONENTS

Cracks

- Inspect for cracks, broken, or splintered areas. Any crack is serious. Do not ride any bicycle or component that has a crack of any size.

Delamination:

- Delamination is serious damage. Composites are made from layers of fabric. Delamination means that the layers of fabric are no longer bonded together. Do not ride any bicycle or component that has any delamination. These are some delamination clues:
 - A cloudy or white area. This kind of area looks different from the ordinary undamaged areas. Undamaged areas will look glassy and shiny. Delaminated areas will look opaque and cloudy.
 - Bulging or deformed shape. If delamination occurs, the surface shape may change. The surface may have a bump, a bulge, soft spot, or not be smooth and fair.
 - A difference in sound when tapping the surface. If you gently tap the surface of an undamaged composite you will hear a consistent sound, usually a hard, sharp sound. If you then tap a delaminated area, you will hear a different sound, usually duller, less sharp.

Unusual Noises:

- Either a crack or delamination can cause creaking noises while riding. Think about such a noise as a serious warning signal. A well maintained bicycle will be very quiet and free of creaks and squeaks. Investigate and find the source of any noise. It may not be a crack or delamination, but whatever is causing the noise must be fixed before riding.

Misalignment:

- Check for misalignment of the fork by examining the wheel fitted properly in the dropouts. Misalignment of a carbon fork cannot be corrected by attempting to bend or straighten the fork. If the wheel cannot be centered properly by adjusting the fit within the dropouts, do not ride until the fork has been examined by your dealer, and replaced if necessary.

WARNING: Do not ride a fork (or any bicycle component) with any delamination or crack. Riding a delaminated or cracked fork could lead to complete failure, with risk of serious injury or death. Please ensure that the suspect component is destroyed, not sold.

P5X MANUAL