

**TREK**



# 2023 FUEL EXE

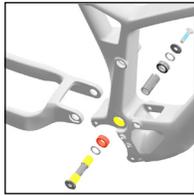
SERVICE MANUAL

Rev 4 September 2023

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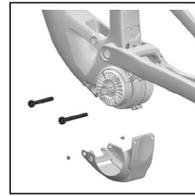
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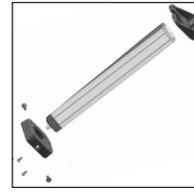
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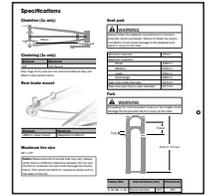
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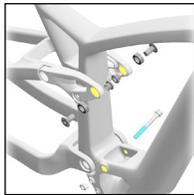
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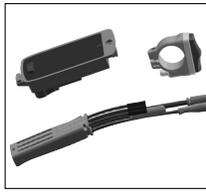
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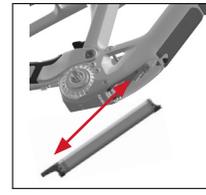
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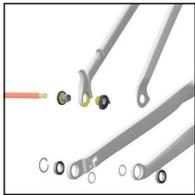
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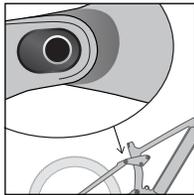
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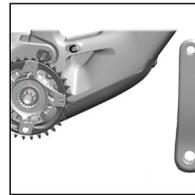
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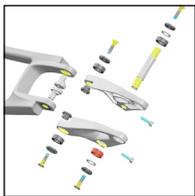
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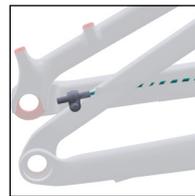
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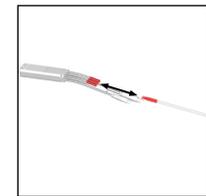
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# Safety

## WARNING

### Tighten hardware properly

Always tighten hardware to the specified torque. Over-tightening hardware could deform or break the hardware or components. Under-tightening hardware could cause hardware or components to become loose. Either situation could damage the bicycle and result in injury to the rider.

## WARNING

### Re-apply threadlocker

All reused-fasteners with a pre-applied threadlocker must be cleaned with isopropyl alcohol and have new threadlocker applied before re-assembly. If a threadlocker is not applied, the fasteners may loosen, which could damage the bicycle and result in injury to the rider.

## Legend



 Apply grease



Do not apply grease



 Apply threadlocker

Nm

Torque



Hex tool



Torx tool

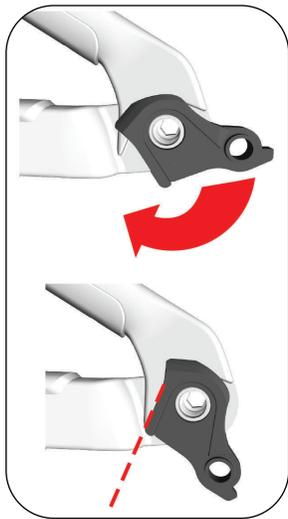


Drift size



Zip tie

# Dérailleur hanger



- ① Dérailleur hanger
- ② Washer, 30 mm
- ③ Bolt

- [W5271425](#)

## Tools

- 8mm hex tool
- Torque wrench (left-hand thread) with 8 mm hex bit



## WARNING

Do not apply grease to the derailleur hanger or bolt.

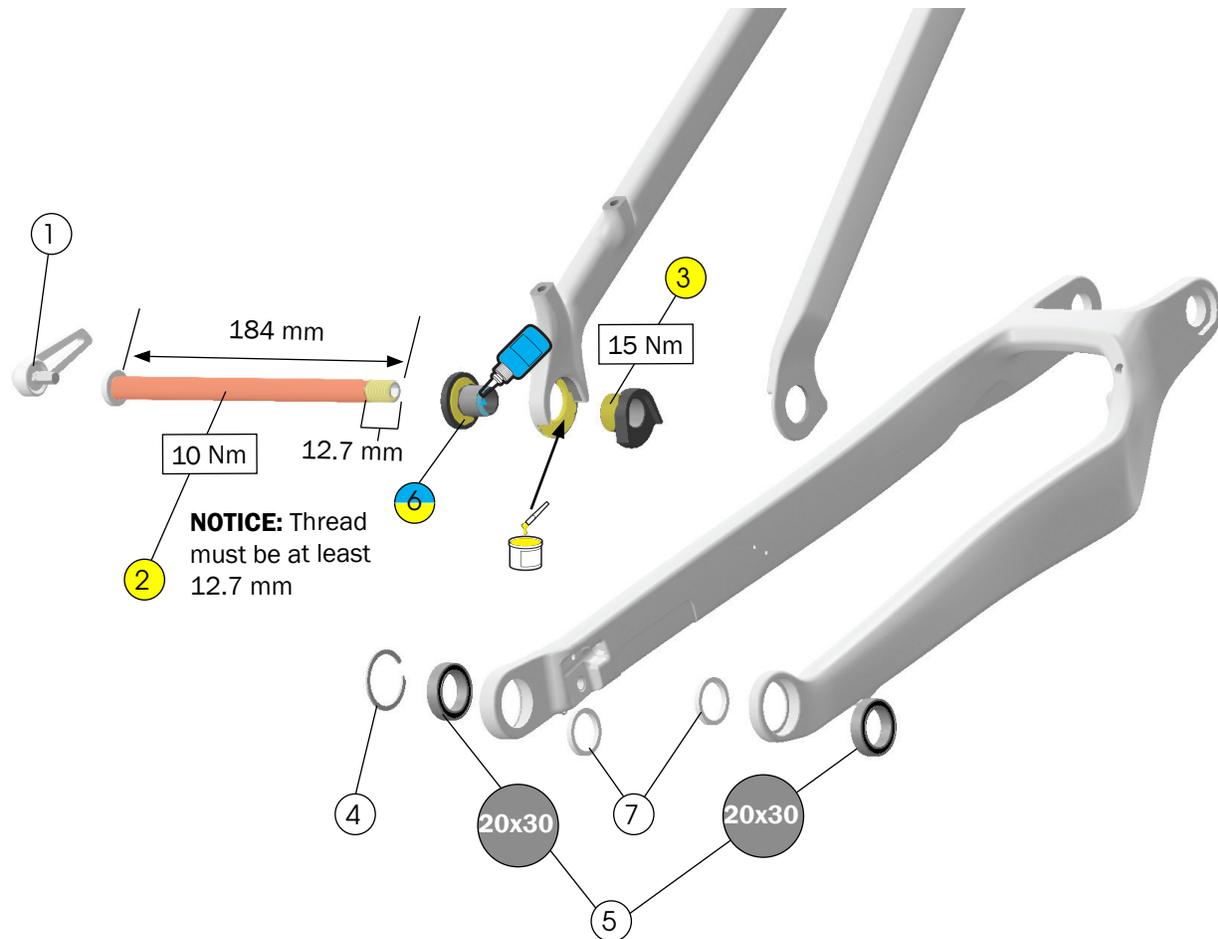
This bicycle frame is designed to use a Universal Derailleur Hanger (UDH).

**NOTICE:** The washer is frame-specific. Install only the washer size specified.

**NOTICE:** Do not over-tighten. Over-tightening the bolt could cause the hanger to break.

For additional information about the UDH, refer to the SRAM user manual at [sram.com](http://sram.com).

# Active Braking Pivot (ABP)



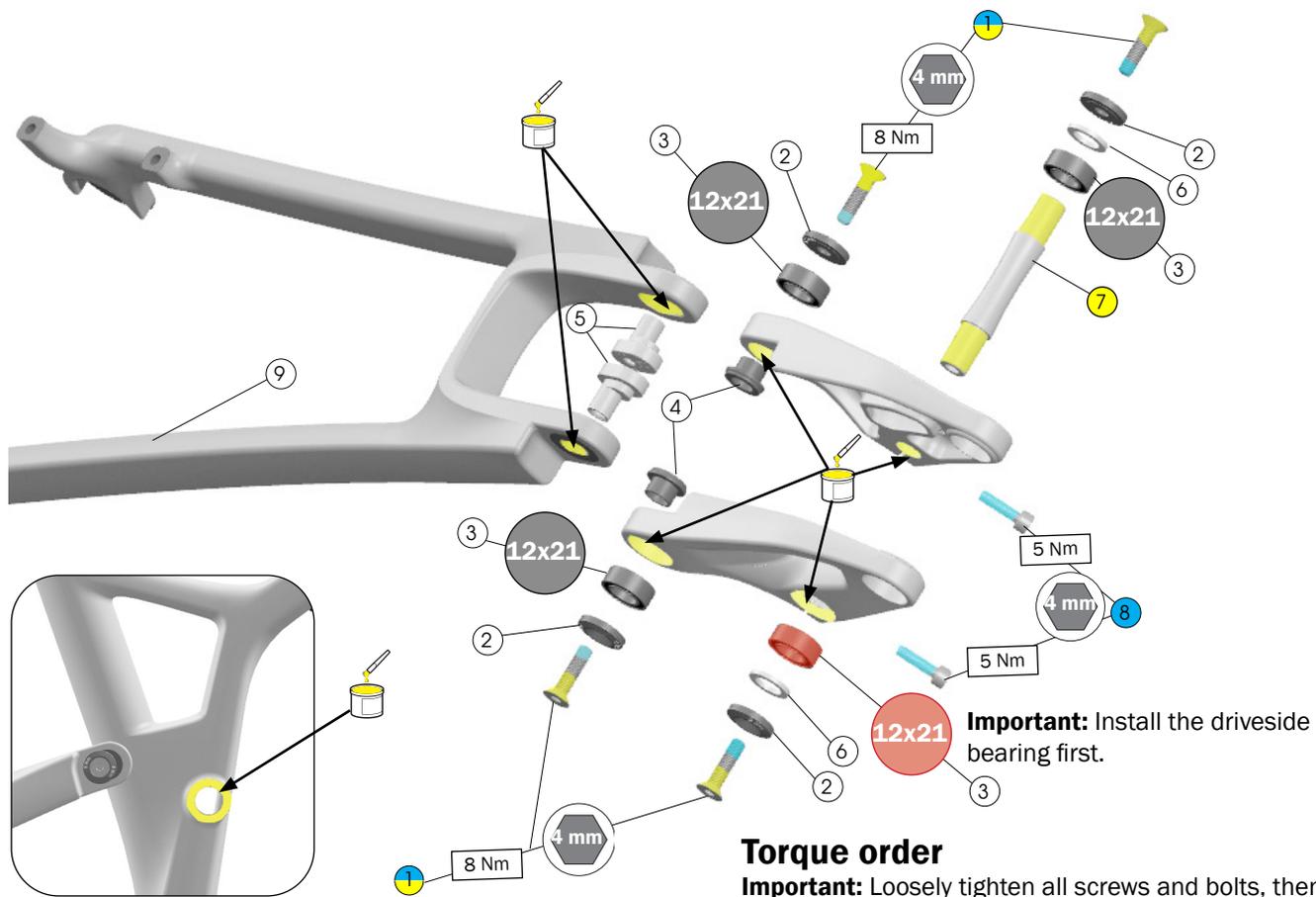
- ① Lever – [W573860](#)
- ② Thru axle – [W583469](#)
- ③ Non-driveside ABP bolt – [W5251141](#)
- ④ Retaining ring – [W5251279](#)
- ⑤ Bearings – [W5256340](#)
- ⑥ ABP Non-driveside guide nut – [W5269707](#)
- ⑦ Spacers (for use with carbon frame only) – [W583422](#)

– [W5272776](#)

## Tools

- Bearing press
- Cassette lock ring tool
- Grease
- Threadlocker

# Rocker pivot and seat stay



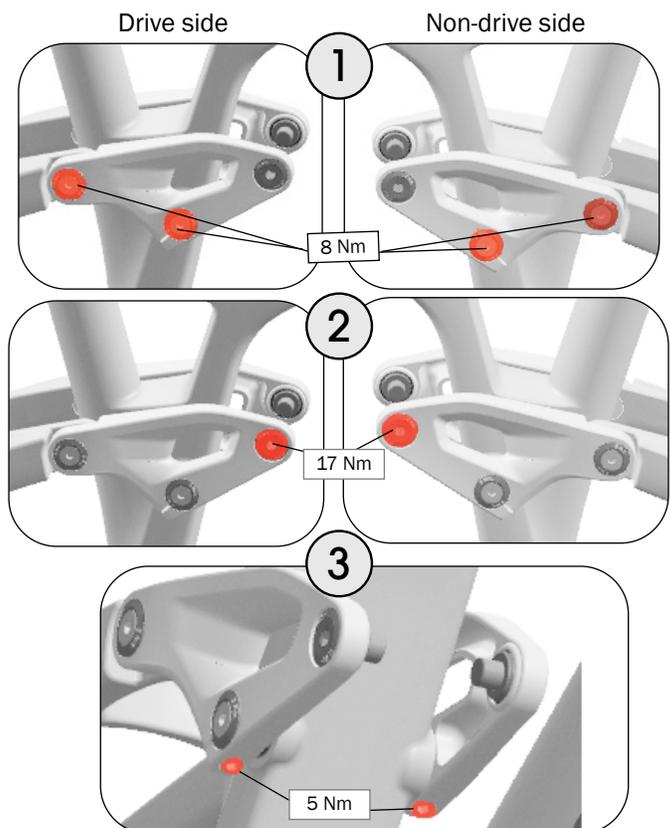
## Torque order

**Important:** Loosely tighten all screws and bolts, then torque in the order shown below. To achieve proper torque on all bolts, rocker link pinch bolts (8) must be torqued last.

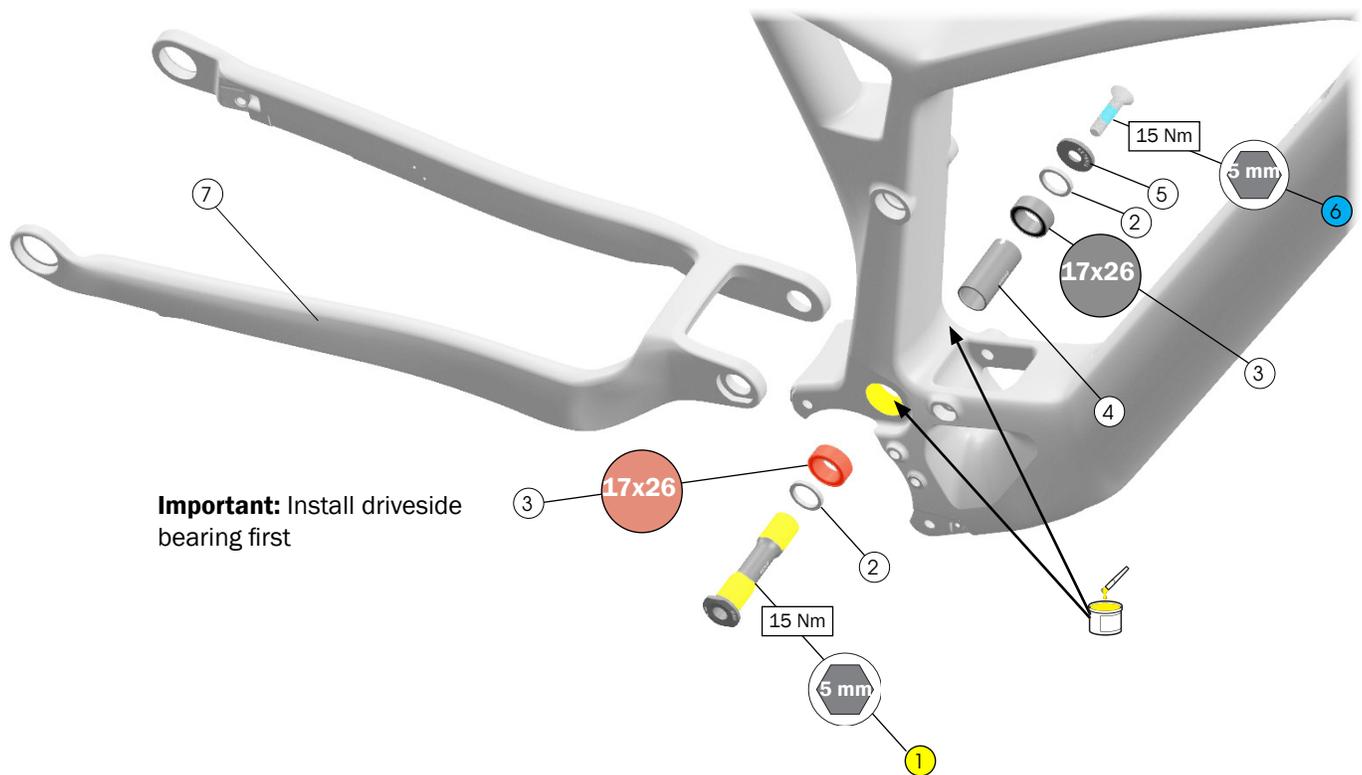
- 1 Screws – [W5270150](#)
- 2 Concave washers – [W5270027](#)
- 3 Bearings – [W5256341](#)
- 4 Hat style washers – [W5270030](#)
- 5 Mino link nuts – [W5270028](#)
- 6 Frame spacers – [W290057](#)
- 7 Rocker pivot axle – [W5271369](#)
- 8 Rocker link pinch bolts – [W5256244](#)
- 9 Seat stay – [40468](#)  
Search [trekbikes.com](http://trekbikes.com) to find the colour-matched part for your bike.

## Tools

- Bearing press
- 4 mm hex wrench
- Torque wrench with 4 mm hex bit
- Grease
- Threadlocker



# Main pivot and chain stay



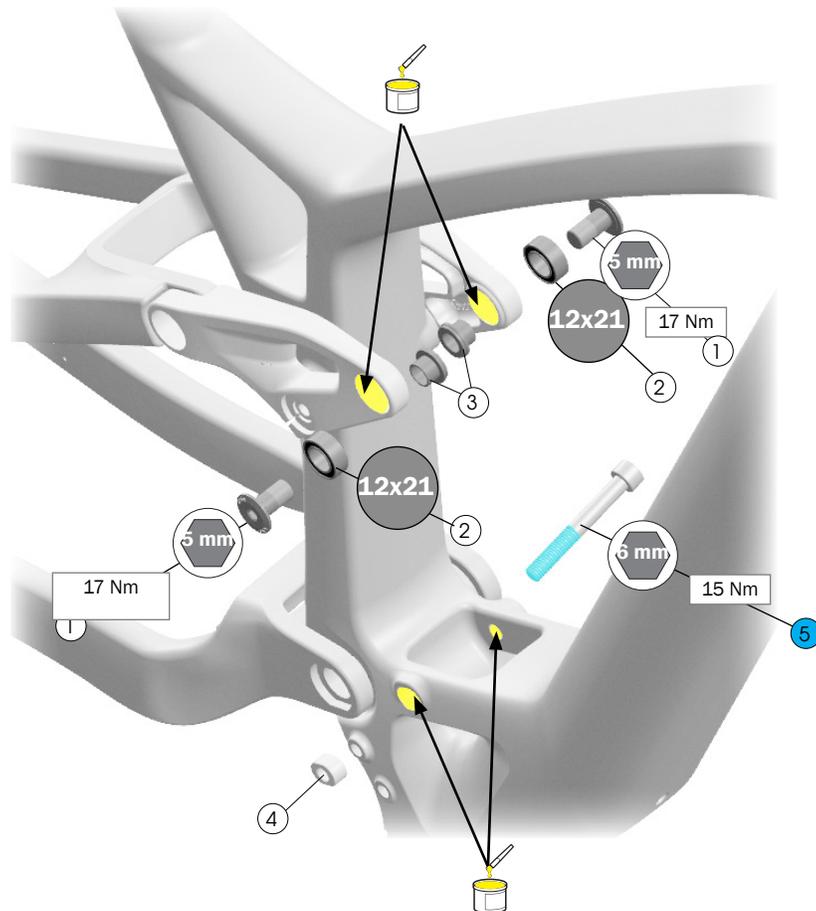
**Important:** Install driveside bearing first

- ① Main pivot axle – [W5270022](#)
- ② Frame spacers – [W440921](#)
- ③ Bearings – [W5256338](#)
- ④ Main pivot sleeve – [W600642](#)
- ⑤ Concave washers – [W5270024](#)
- ⑥ Screws – [W5270149](#)
- ⑦ Chainstay – [40466](#)  
Search [trekbikes.com](#) to find the colour-matched part for your bike.

## Tools

- Bearing press
- 5 mm hex tool
- Torque wrench with 5mm hex bit
- Grease
- Threadlocker

# Rear shock hardware and dimensions



## Shock Dimensions

Eye-to-eye length: 205 mm

Stroke length: 60 mm

Upper width: 54 mm x 10 mm

Lower width: 40 mm x 8 mm

- ① Upper bolts, M10 x 1 x 19 mm – [W5270031](#)
  - ② Bearings – [W5256341](#)
  - ③ Hat-style washers – [W5270030](#)
  - ④ Nut – [W286347](#)
  - ⑤ Lower bolt, M8 x 1 x 60 mm
- } – [5272748](#)

## Tools

- Bearing press
- 6 mm hex wrenches
- Torque wrench with 6 mm bit
- Grease
- Threadlocker

## Set-up

**Recommended sag:** 30%, 18 mm

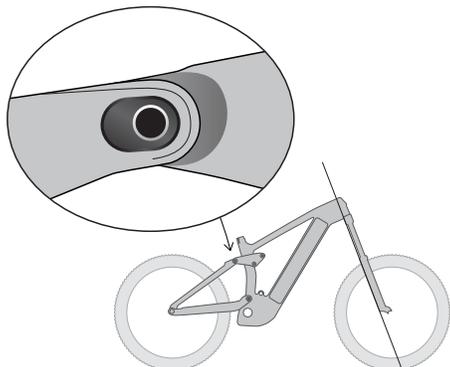
Refer to the suspension set-up card included with your bike or the suspension calculator at [trekbikes.com/suspension-calculator](https://trekbikes.com/suspension-calculator).

For recommended rebound settings, refer to the suspension calculator at [trekbikes.com/suspension-calculator](https://trekbikes.com/suspension-calculator).

# Adjust the geometry

Flip the Mino link to change the bike's geometry to fit your riding style or the terrain.

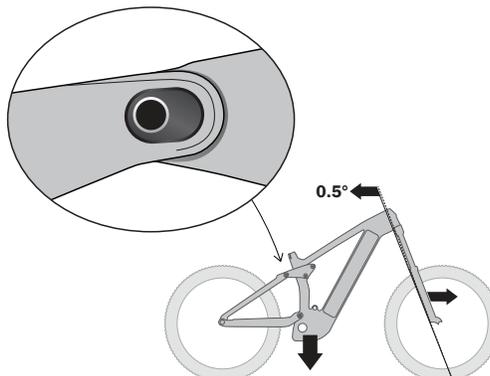
## Steeper head tube angle



Mino link in the high position

- Pulls in the front fork for quicker steering
- Raises the bottom bracket for improved climbing

## Slacker head tube angle

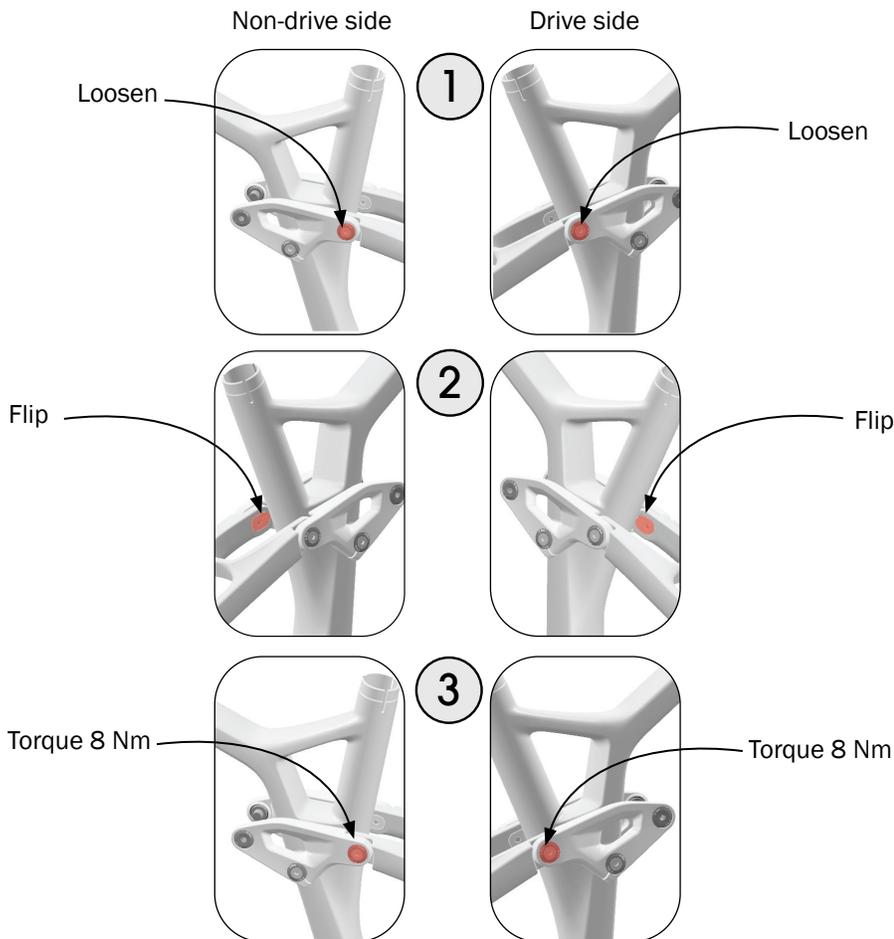


Mino link in the low position

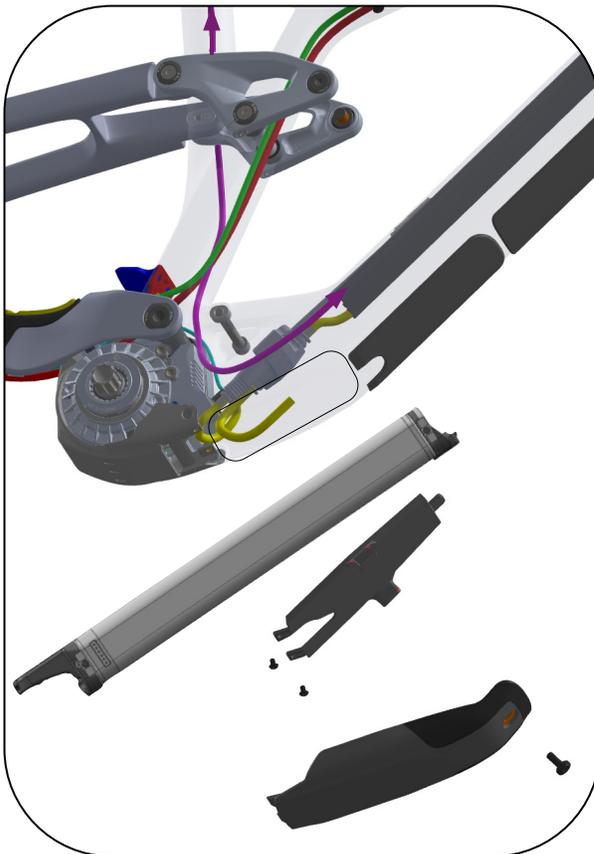
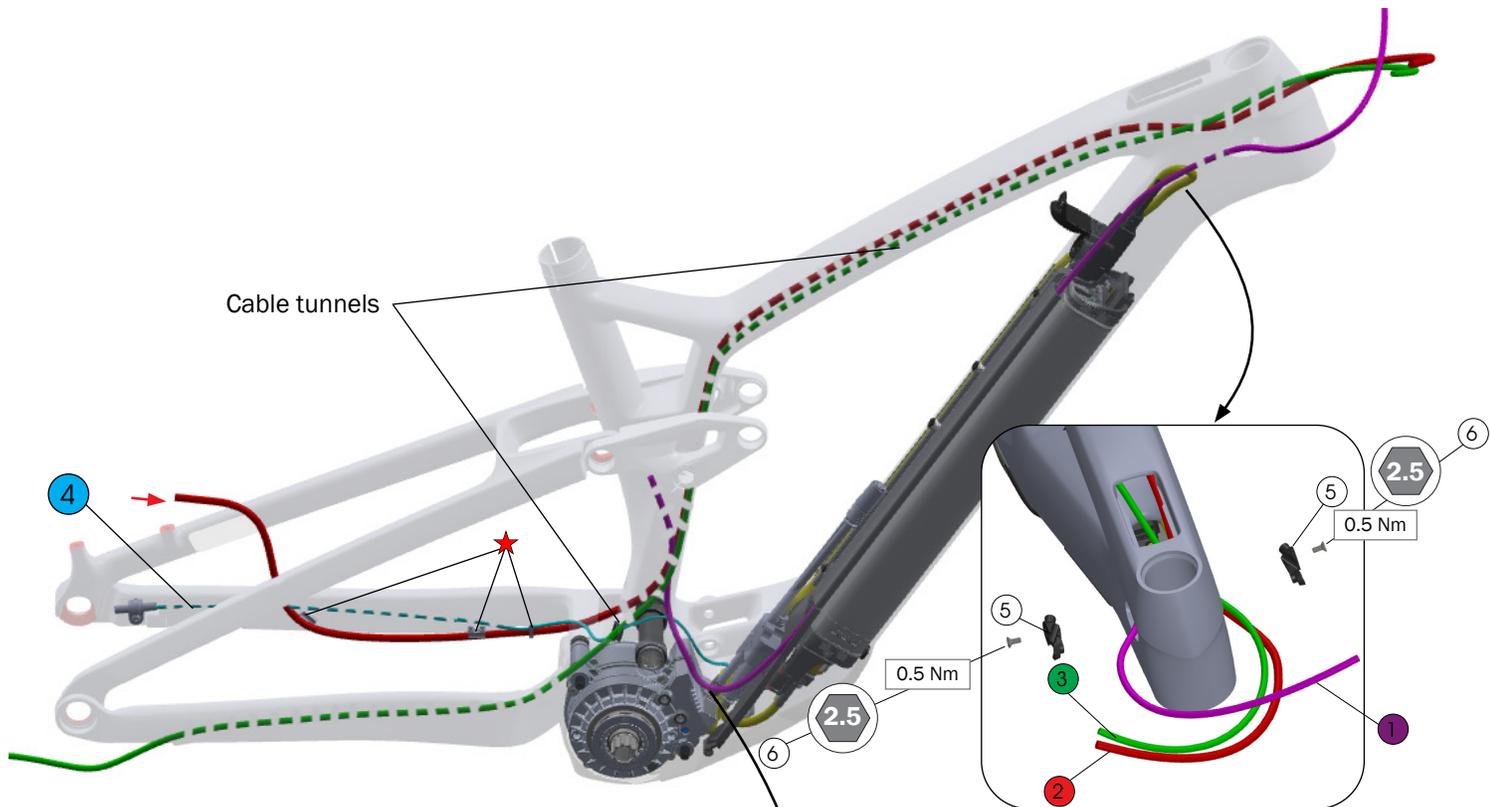
- Pushes the head tube angle back 0.5° and pushes out the front fork for slower steering that is more stable at high speed
- Lowers the bottom bracket up to 9 mm for more stability

## Tools

- 4 mm hex tool
- Torque wrench with 4 mm hex bit



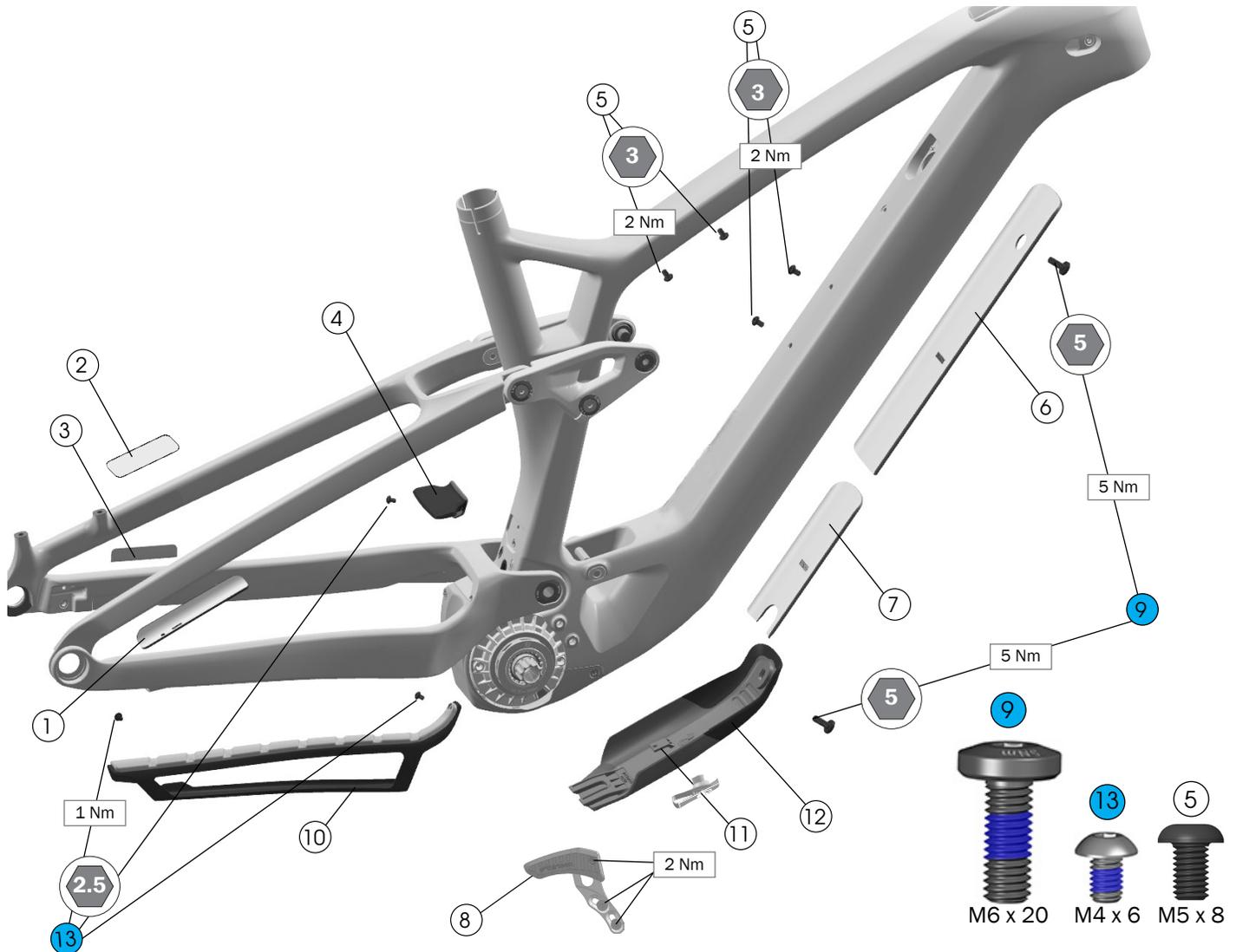
# Brake, derailleur and dropper post routing



**Dropper post cable routing**  
(See pages 9 and 11 for part information)

- 1** Dropper post cable
  1. Remove the battery cover, access cover and battery (See [Remove and install the battery on page 19](#)).
  2. Route the cable from the bottom up through the seat post and up through the cable tray in the down tube.
- 2** Brake hose
  1. Remove the display from the top tube for easier access.
  2. Route the brake hose back to front.
- 3** Derailleur cable housing
  1. Remove the display from the top tube for easier access.
  2. Route the cable housing back to front.
- 4** Speed sensor cable
- 5** Exit guide — [W519232](#)
- 6** Bolts — [W532763](#)
- ★ Zip tie

# Guards and water bottle mounts



- ① Seat stay adhesive guard – [W5271371](#)
- ② Brake hose adhesive guard – [W326986](#)
- ③ Rotor guard – [W580881](#)
  1. To improve adhesion, use sandpaper to roughen the back side of the guard and the area of the frame where epoxy will be applied.
  2. Attach the guard with a two-part epoxy.
  3. Allow the guard and epoxy to cure for 24 hours.
- ④ Main pivot mud flap – [W5275234](#)
- ⑤ Accessory mount screws – [W598484](#)
- ⑥ Shuttle adhesive guard (optional) – [W5280162](#)
- ⑦ Downtube adhesive guard – [W5273589](#)
- ⑧ Chain guard with bolts – [W5276728](#)
- ⑨ Battery mount bolt – [W5275266](#)
- ⑩ Chainstay guard – [W5271370](#)
- ⑪ Clip nut (Use when battery is not installed) – [W5284890](#)
- ⑫ Battery cover – [W5271937](#)
- ⑬ Button head screws – [W575056](#)

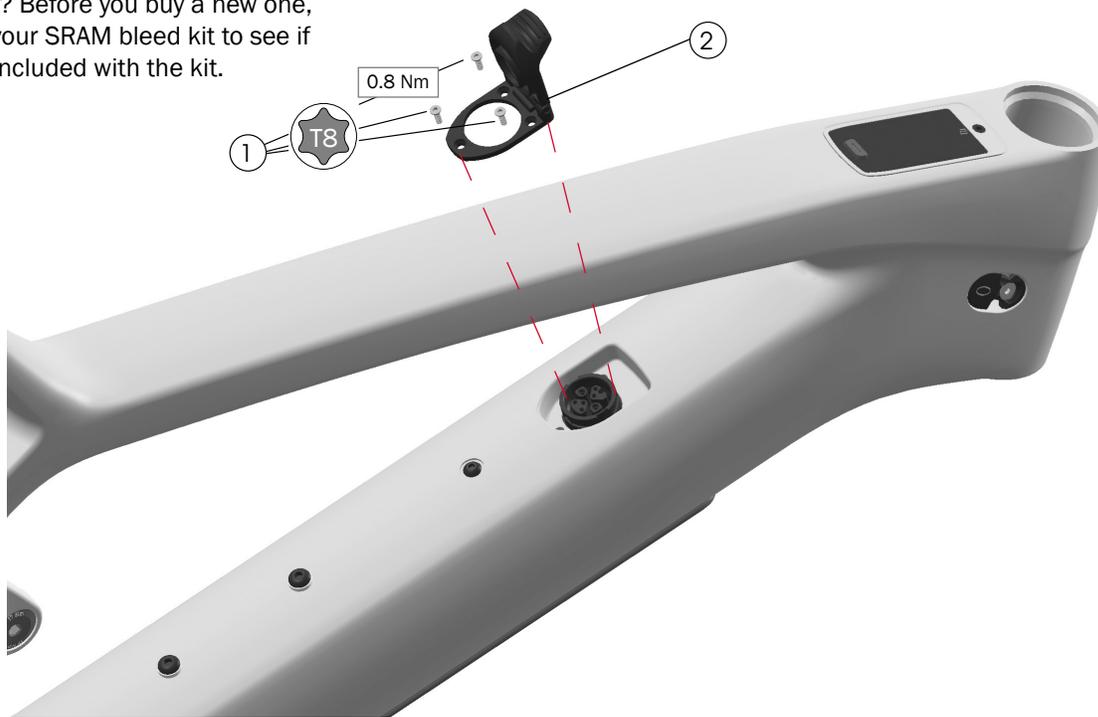
## Adhesive Guards ① ② ⑦ ⑧

Use isopropyl alcohol to clean the frame surface where the guard is attached. Wait for the alcohol to dry before applying the guard.

**Notice:** Do not clean the entire frame with isopropyl alcohol. Isopropyl alcohol could damage the paint.

## Charge port cover

**Tip:** Not sure if you have a T8 Torx wrench? Before you buy a new one, check your SRAM bleed kit to see if one is included with the kit.



① Bolts, M2,5 x 8mm

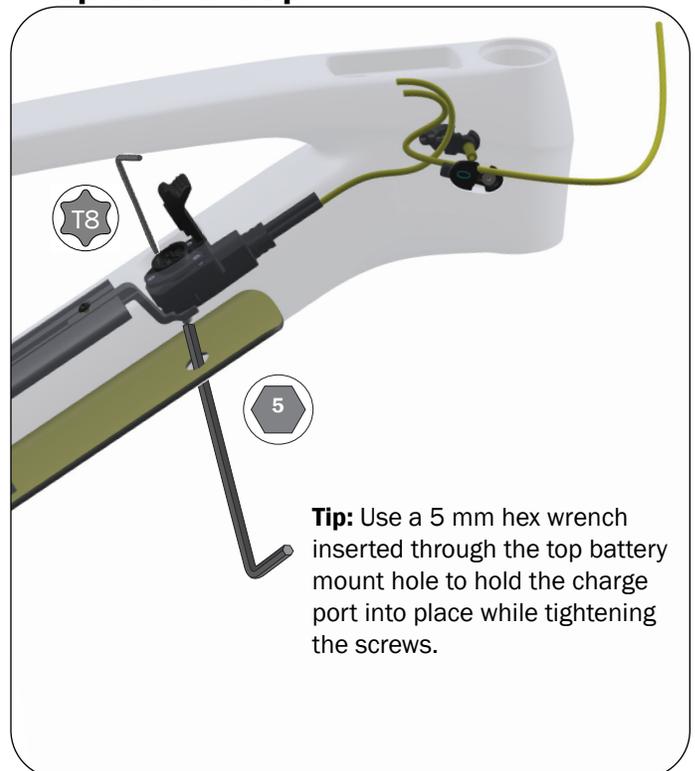
② Charge port cover

- [5289578](#)

### Tools

- T8 Torx wrench
- 5 mm hex wrench

### Replacement tip



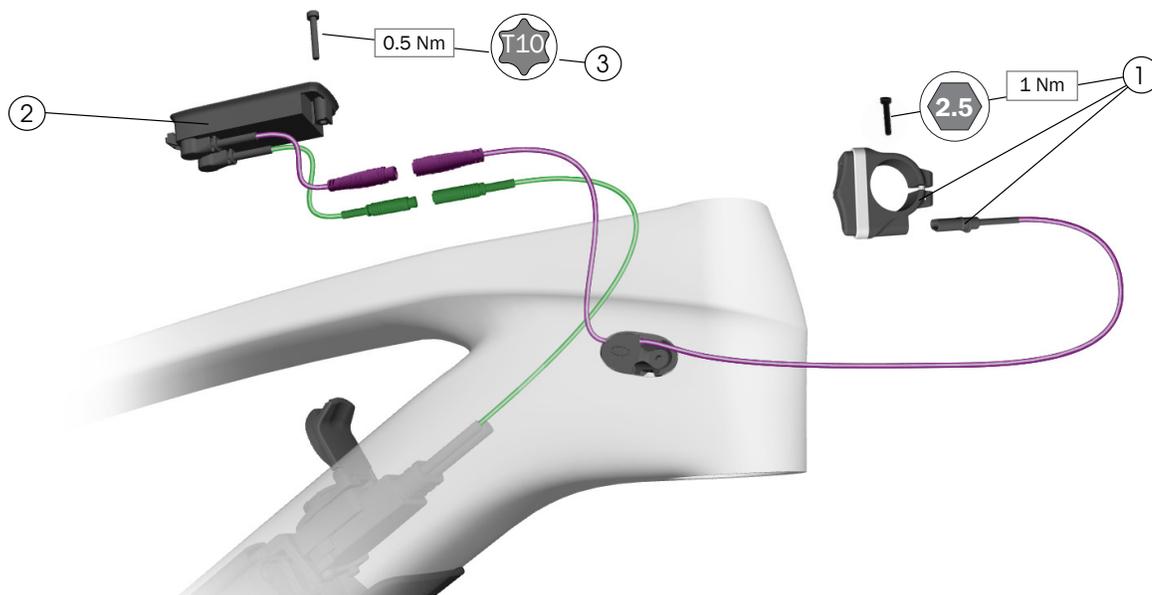
**Tip:** Use a 5 mm hex wrench inserted through the top battery mount hole to hold the charge port into place while tightening the screws.

# Remote, display and Smart Box

## For detailed service instructions:

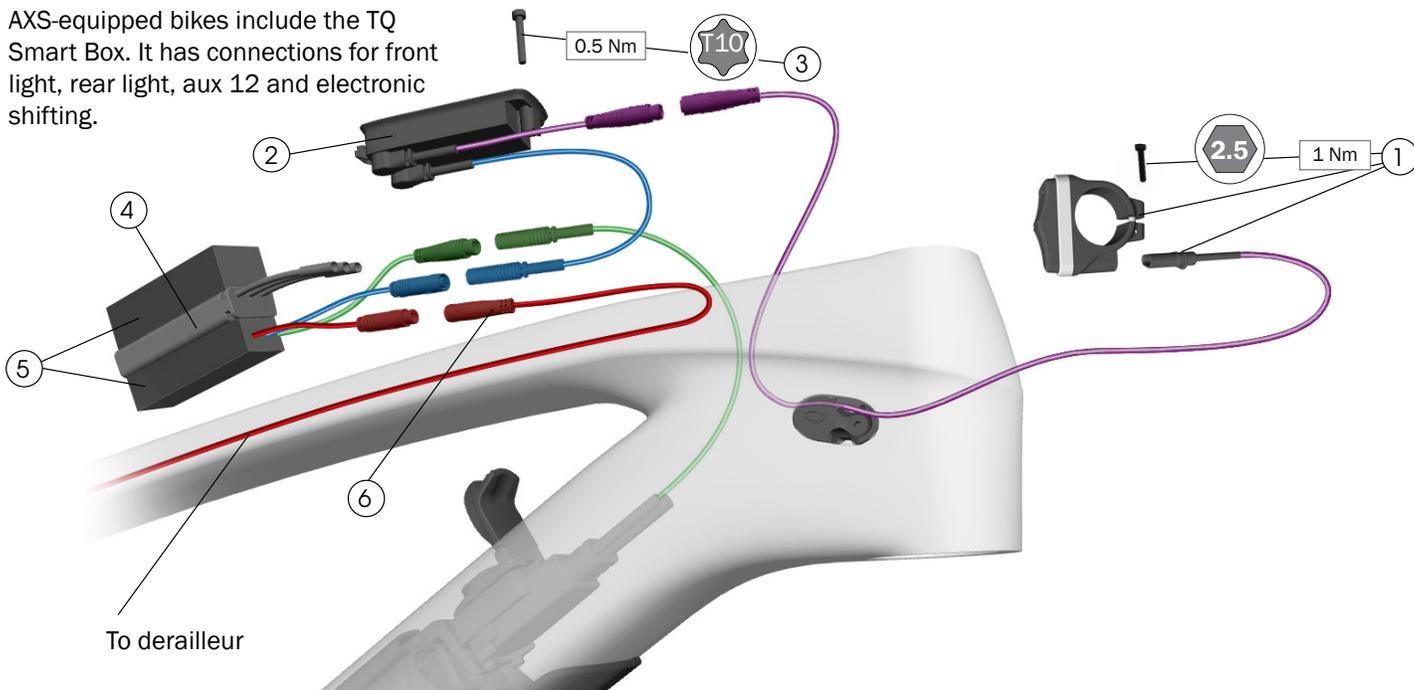
Refer to the TQ service manuals found on [tq-ebike.com/en/support/manuals](http://tq-ebike.com/en/support/manuals).

### Bikes without a TQ Smart Box



### Bikes with a TQ Smart Box

AXS-equipped bikes include the TQ Smart Box. It has connections for front light, rear light, aux 12 and electronic shifting.



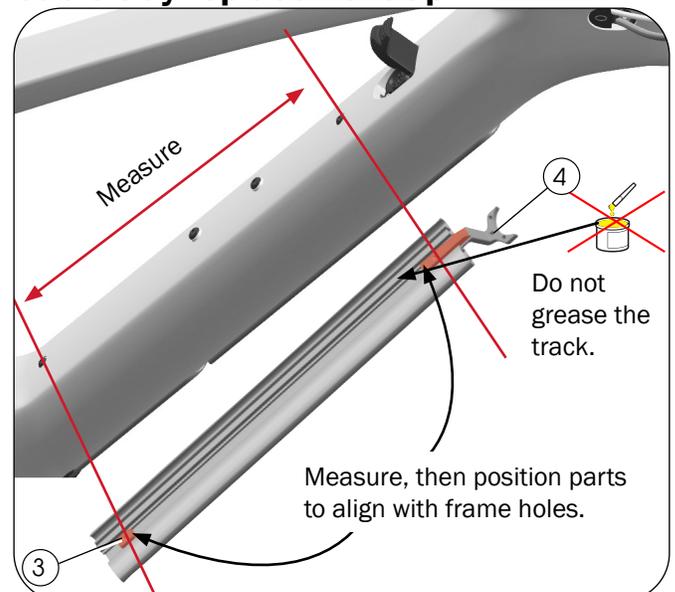
- |   |   |
|---|---|
| ① Remote, including screw – <a href="#">5289561</a> | ④ Smart box – <a href="#">5289564</a>               |
| ② Display – <a href="#">5289562</a>                 | ⑤ Foam blocks, set of two – <a href="#">5305634</a> |
| ③ Socket head bolt – <a href="#">5305631</a>        | ⑥ AXS derailleur cable – <a href="#">5289566</a>    |
- } – 5289562

# Wiring harness and cable tray organiser



- ① Button head cap screws – [W575056](#)
- ② Cable tray – [W5274993](#)
- ③ Sliding T nut – [W5283261](#)
- ④ Charge port holder – [W5274996](#)
- ⑤ Screws – [W545633](#)
- ⑥ Wiring harness – [5289573](#)
- ⑦ Access cover – [W5271943](#)
- ⑧ Screws – [W575056](#)

## Cable tray replacement tip

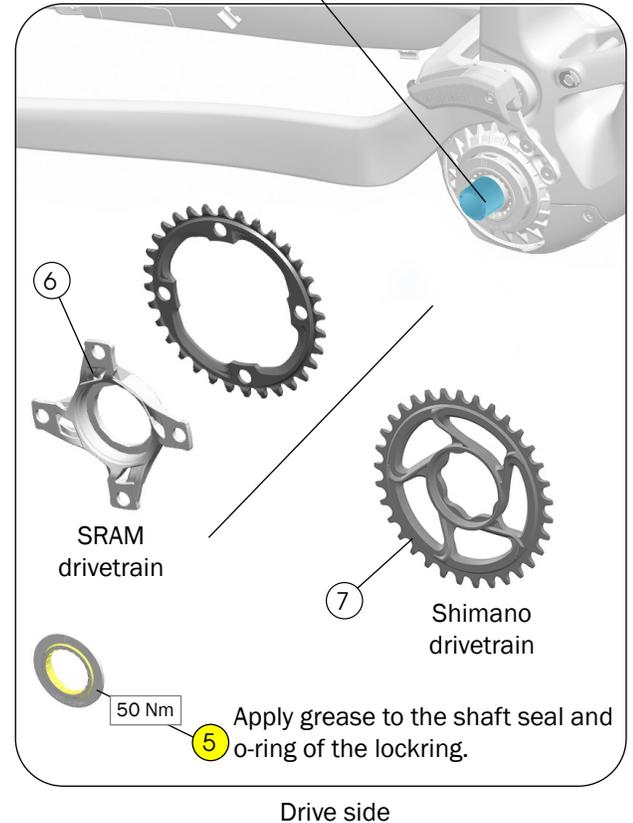
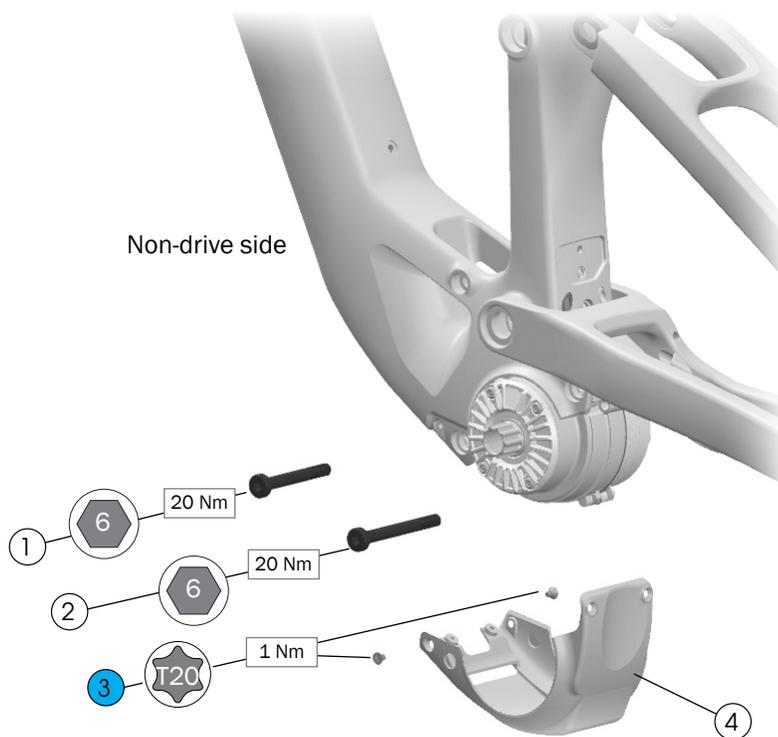


# Drive unit

## For detailed service instructions:

Refer to the TQ service manuals found on [tq-ebike.com/en/support/manuals](http://tq-ebike.com/en/support/manuals).

**Notice:** Before assembling the chain ring (spider) or lockring, place the included protective sleeve over the bottom bracket spindle. Failure to use the sleeve could damage the seal on the lockring and allow water to damage the motor. Remove after assembly.



## Tools

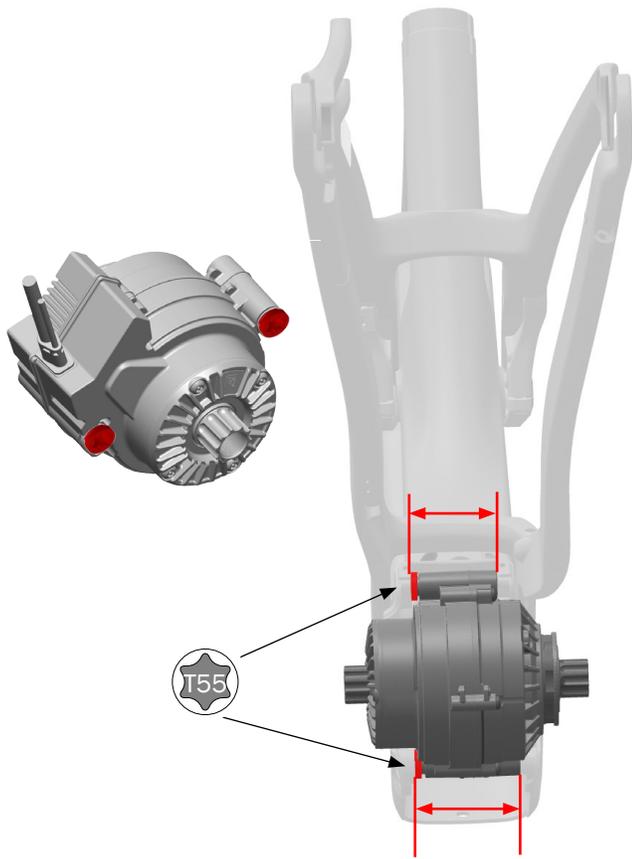
- 6 mm hex wrench
- T20 Torx wrench
- Torque wrench with 6 mm bit
- BB-UN55 bottom bracket tool – part number 536183

- |   |   |                             |
|---|---|-----------------------------|
| 1 | Front motor bolt, 73 mm   | } - <a href="#">5289570</a> |
| 2 | Rear motor bolt, 62 mm  |                             |
| 3 | Screws, 4-pack – <a href="#">5269023</a>                                |                             |
| 4 | Motor guard – <a href="#">W5271938</a>                                  |                             |
| 5 | Lockring – <a href="#">5289572</a>                                      |                             |
| 6 | FSA spider for SRAM spec models – <a href="#">W5275013</a>              |                             |
| 7 | e*Thirteen chainring for Shimano Spec models – <a href="#">W5272388</a> |                             |

**Notice:** To disconnect the speed sensor from the drive unit, hold each connector and gently pull them apart. Do not pull the cable. Pulling the cable could damage the speed sensor. Notice: Do not carry the drive unit by the cables because this could damage the drive unit.

## Adjust the compensation screws

Before mounting a replacement drive unit, adjust the compensation screws (tighten or loosen) to match the frame as shown

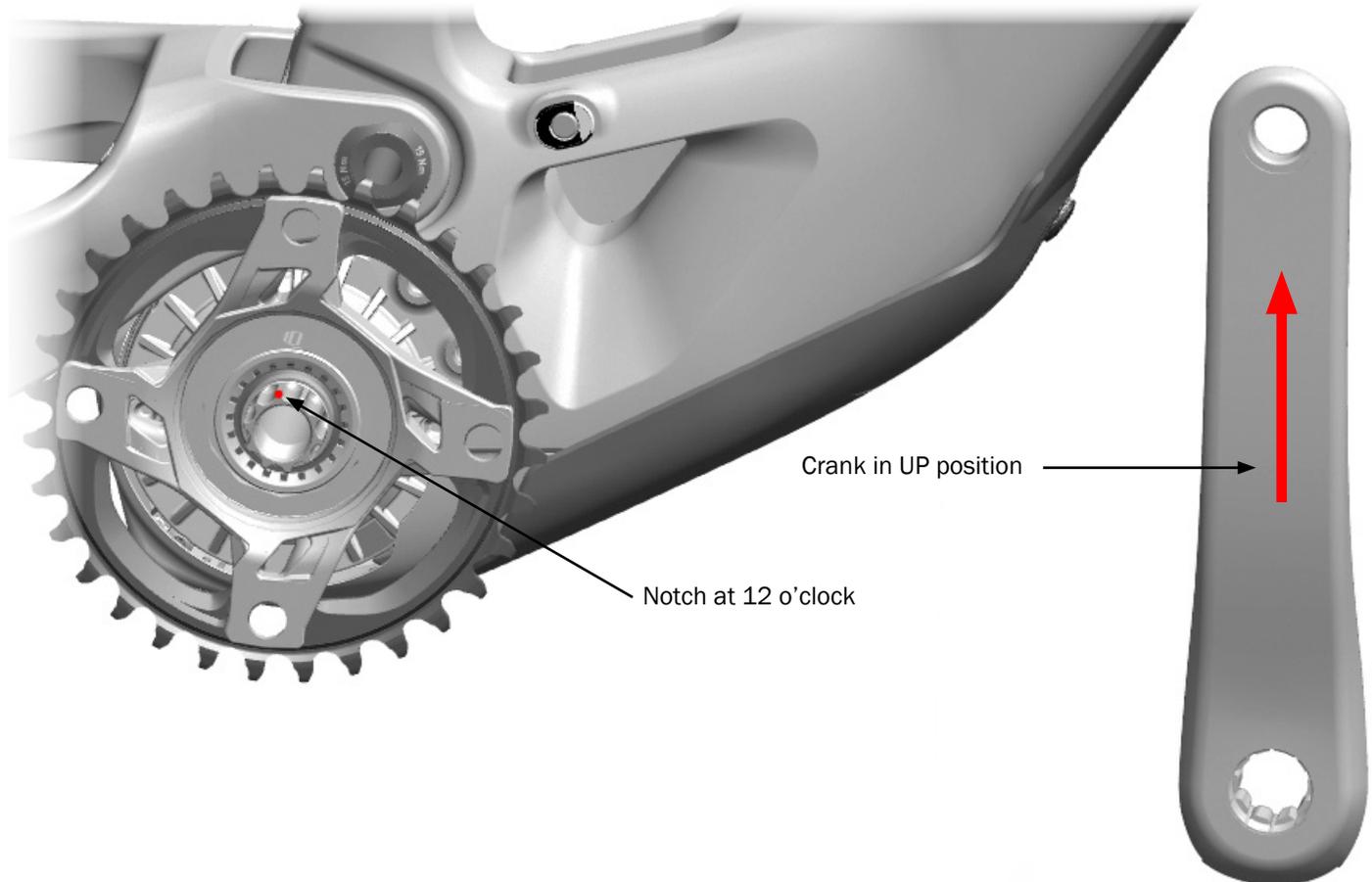


**NOTE:** Only adjust the compensation screws if you are replacing the drive unit.

## Re-installing the cranks

**Note:** a CWP-7 Crank Puller be helpful to remove some types of crank arms.

The TQ system is designed for cranks to be installed in the UP position and in alignment with the notches on spindle. Installing the cranks in a different position will cause the drive unit to run rough for a few hundred meters until the system re-learns the position of the cranks.

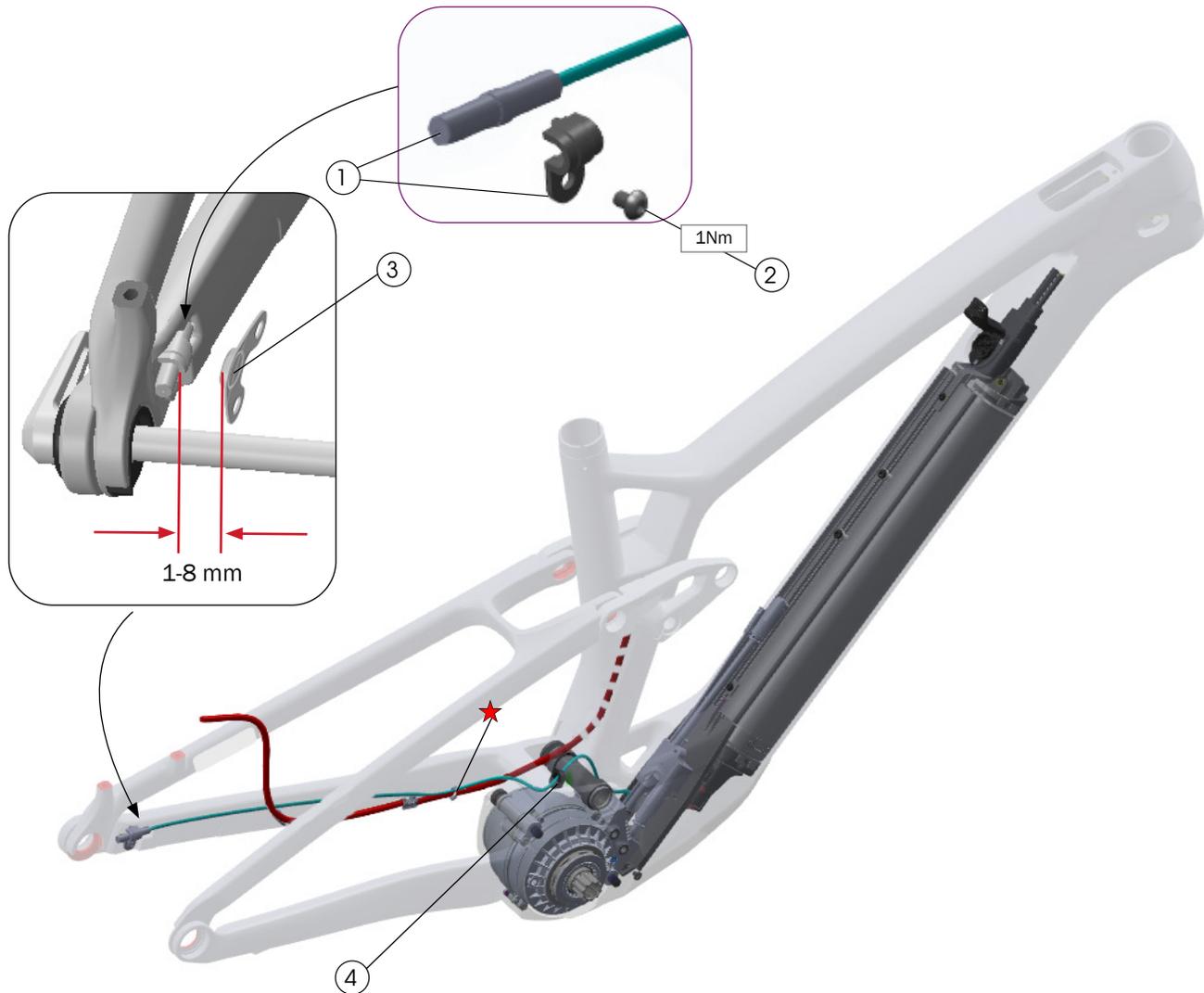


1. Locate the notch on the spindle. There are notches on the driveside and non-driveside.
2. Rotate the spindle until one notch is at the 12 o'clock position.
3. Install the crank in the up position.

# Speed sensor

## For detailed service instructions:

Refer to the TQ service manuals found on [tq-ebike.com/en/support/manuals](http://tq-ebike.com/en/support/manuals).



- ① Speed sensor cable and clip – [5289567](#)
- ② Bolt, M4 x 6 mm – [W575056](#)
- ③ Magnet – [5289568](#)
- ④ Cable grommet – [W5255861](#)

**Notice:** To disconnect the speed sensor from the drive unit, hold each connector and gently pull them apart. Do not pull the cable. Pulling the cable could damage the speed sensor.

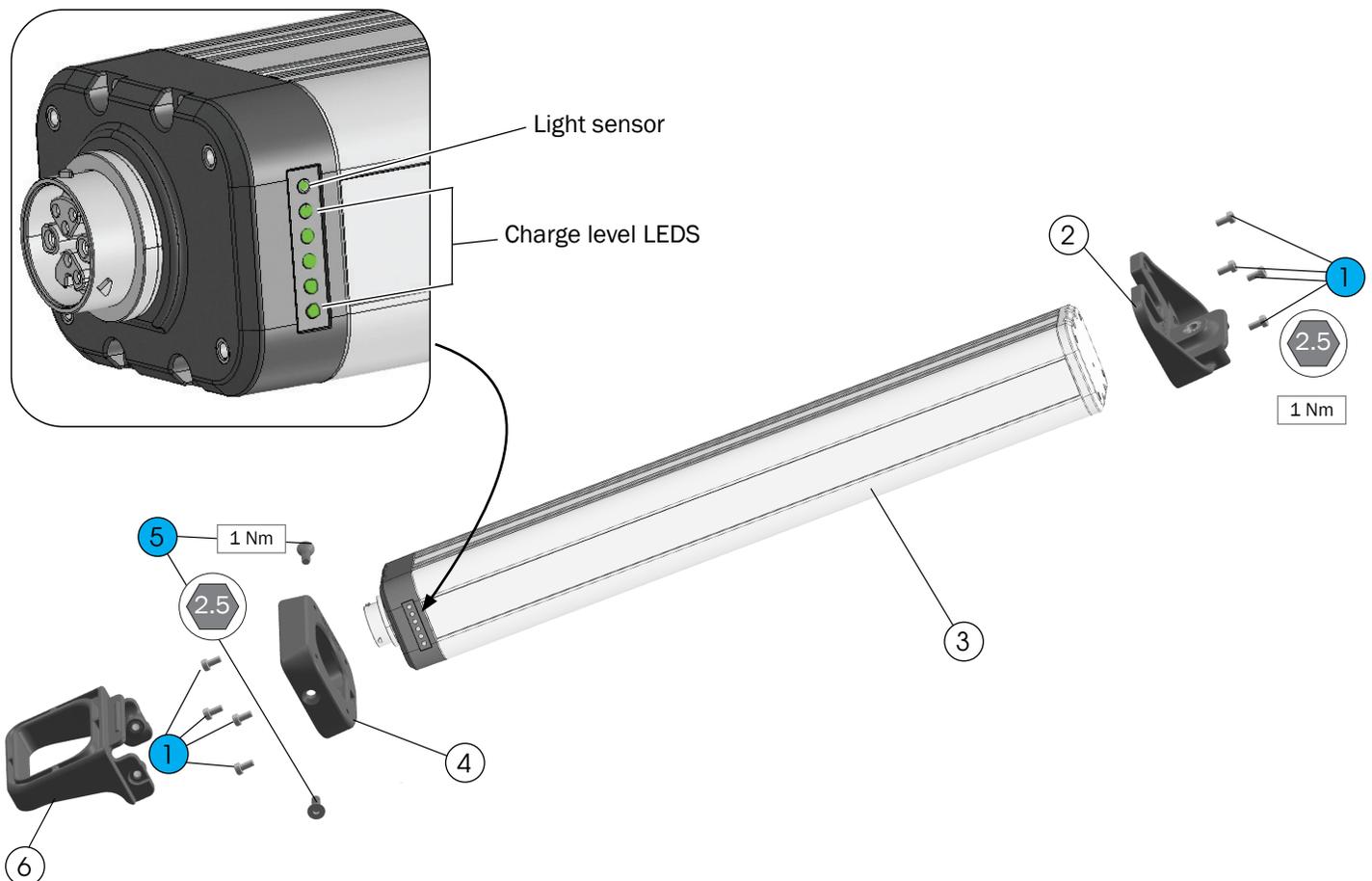
## Replacement tip

1. To aid in removing the cable, use an internal routing tool to chase the cable as you remove it.
2. Attach a new wire and reverse the process.

# Battery

## For detailed service instructions:

Refer the TQ service manuals found on [tq-ebike.com/en/support/manuals](http://tq-ebike.com/en/support/manuals).



- ① Bolts — [W581747](#)
- ② Upper battery end cap — [W5298492](#)
- ③ Battery — [5289554](#)
- ④ Lower battery end cap — [W5273187](#)
- ⑤ Bolts — [5305635](#)
- ⑥ Battery pull handle — [W5273188](#)

## Tools

- 2.5 mm hex tool

## Assembly

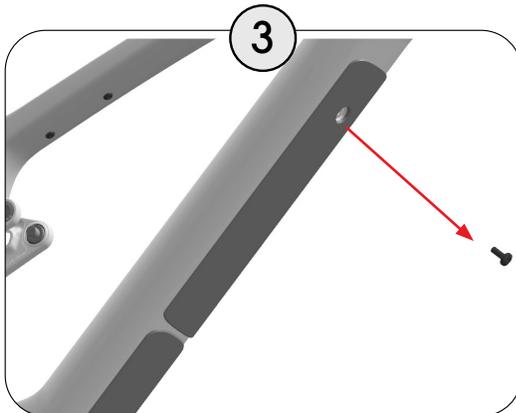
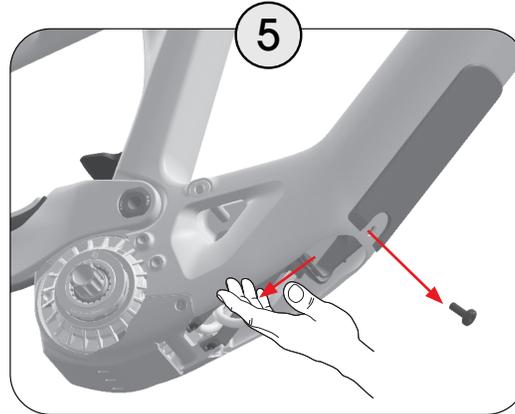
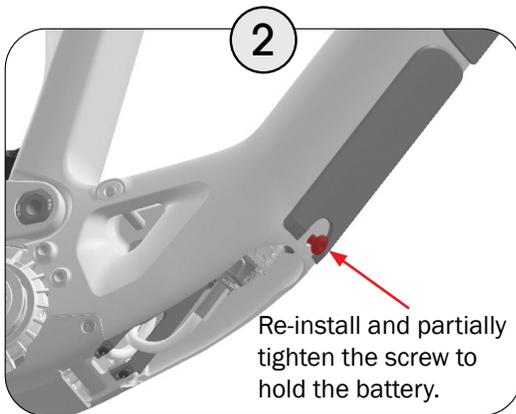
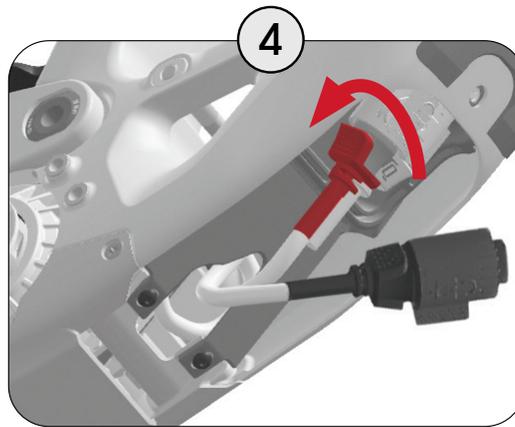
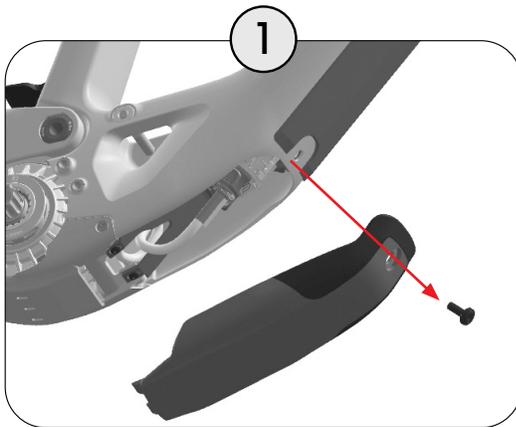
**Notice:** Assemble the handle in the orientation shown above, and with the battery positioned so the LEDs will be on the drive side. The battery will not install properly if it is assembled incorrectly.

## Charge level LEDs

The LEDs on the battery indicate the charge level. To refresh the status, place a finger over the LEDs for a few seconds, then uncover. Each LED represents 20% of the battery charge.

# Remove and install the battery

## Remove the battery



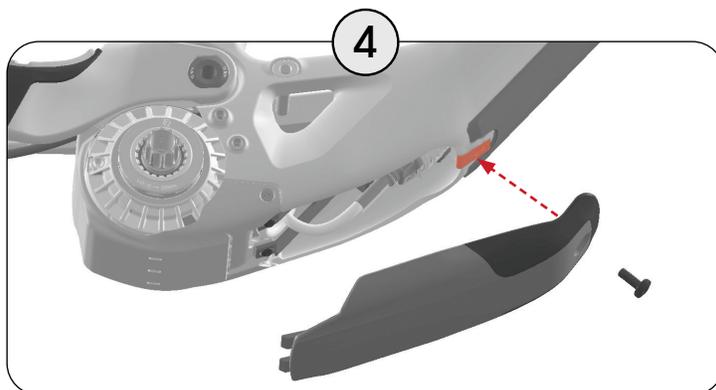
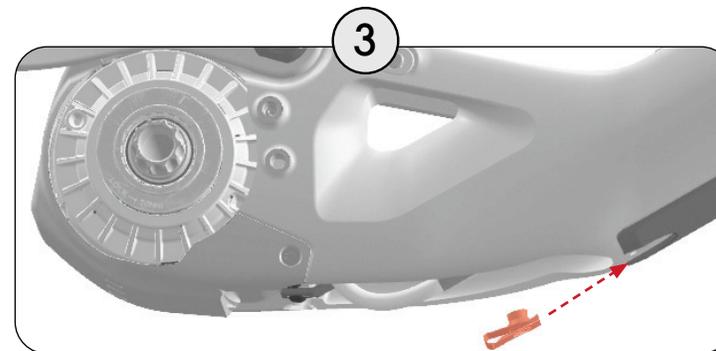
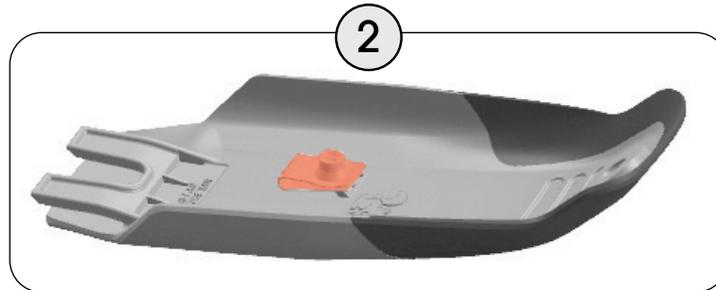
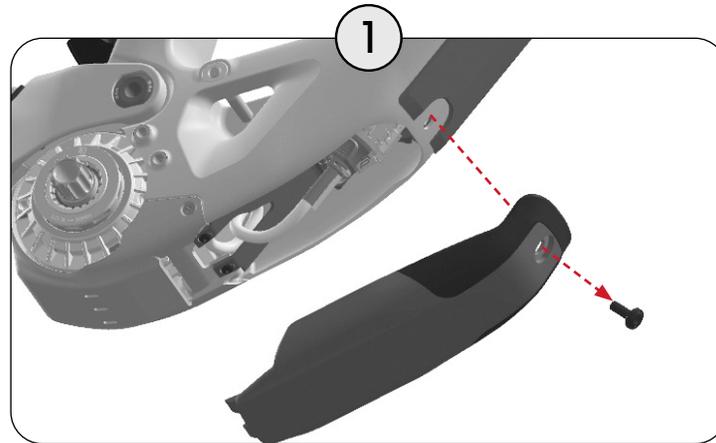
**NOTICE:** Guide the battery out of the frame. When the last battery mount screw is removed, the battery will slide out of the frame. To prevent the battery from falling, place one hand under the battery to support it while removing the last screw.

## Install the battery

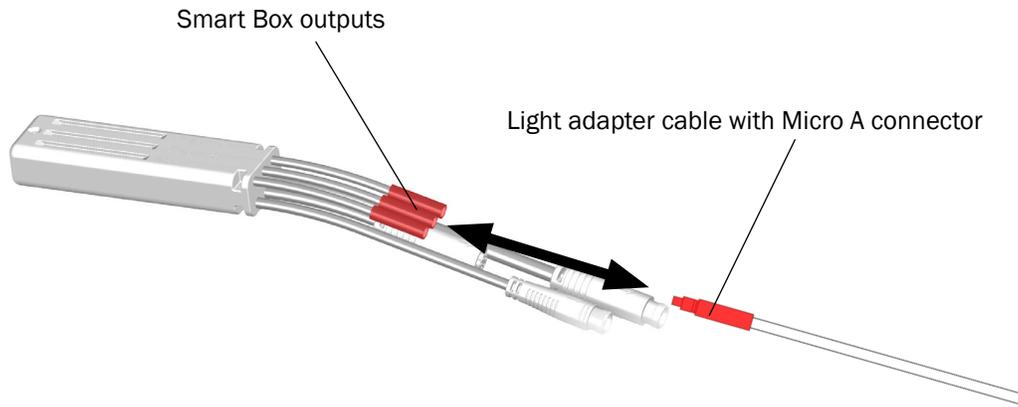
1. Insert the battery.
2. Install the top mounting screw to hold the battery in place.
3. Plug in the battery.
4. Rotate the battery lock to the closed position.
5. Gently tug the battery handle to verify the battery is locked into place.
6. Install the battery cover.
7. Torque the top and bottom mountings screws to 5 Nm.

## Ride the bike without the battery

The battery helps hold the motor cover in place. To ride the bike without the battery, you must install the clip nut to hold the motor cover in place. The clip nut is stored on the inside of the battery cover.



## Connect lights to the TQ Smart Box

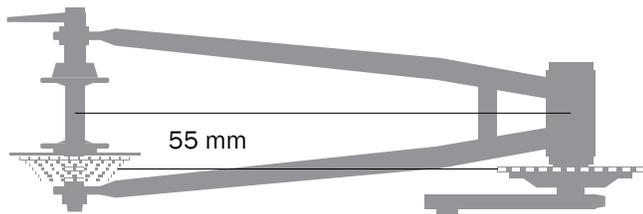


Lights can be connected to the TQ smart box and powered by the bike battery. The Smartbox power outputs must be activated via the Dealer Service Tool.

- **Maximum power (front and rear light combined):** 20 W at 12 V.
- **List of compatible lights:** refer to TQ's FAQ:
  - **English:** [tq-ebike.com/en/support/faq](https://tq-ebike.com/en/support/faq)
  - **German:** [tq-ebike.com/de/support/faq](https://tq-ebike.com/de/support/faq)
- **Required:**
  - A light adapter cable with a Micro A connector.
  - The Dealer Service Tool (shop use only) to activate the power output on the Smart Box.

# Specifications

## Chain line (1x only)



## Chain ring (1x only)

Minimum	Maximum
30T	34T Round

Oval rings of any size are not recommended as they will affect motor performance.

## Rear brake mount



Minimum	Maximum
180 mm, direct mount	Adaptable to 203 mm

## Maximum tyre size

29" x 2.5"

**Notice:** Measurements of actual tyres may vary. Always verify that there is sufficient clearance between the tyre and the frame. Improper tyre size could damage the bicycle frame. Trek recommends 6 mm clearance above and on the sides of the tyre.

## Seat post

	<b>WARNING</b>
Always follow the seat post manufacturer's minimum insertion recommendation. Failure to follow the recommendation could cause damage to the seat post and result in injury to the rider.	

Minimum insertion 75 mm

Maximum insertion

Small 190 mm

Medium 225 mm

Large 250 mm

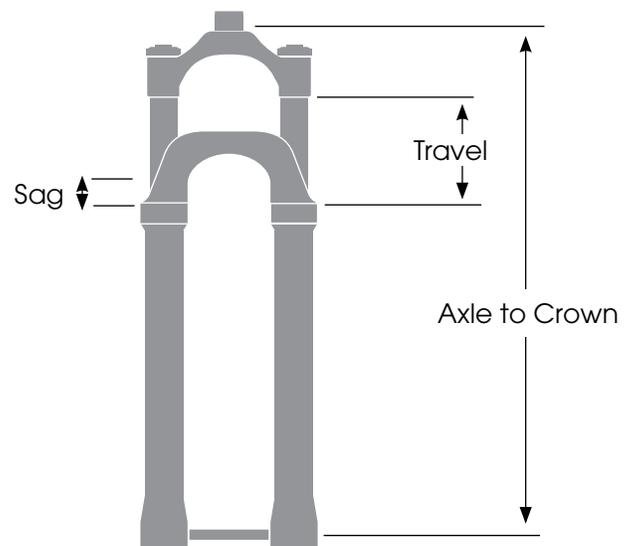
Extra Large 285 mm

Seat tube inside diameter 34.9 mm

Seat tube post clamp outer diameter 39.7 mm

## Fork

	<b>WARNING</b>
Exceeding the recommended maximum fork length could damage the bicycle and result in injury to the rider.	



Frame/Size	Axle to Crown (mm)		Travel (mm)
	Recommended	Maximum	
S, M, ML, L, XL	Recommended	557	150
	Maximum	567	160

**Recommended sag:** Refer to the suspension set-up card included with your bike or the suspension calculator at [Trek bikes.com/suspension-calculator](https://trekbikes.com/suspension-calculator).