

**TREK**



# 2023 FUEL EXE

SERVICE MANUAL

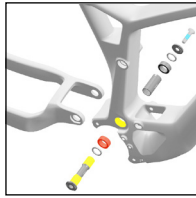
Rev 3 January 2023



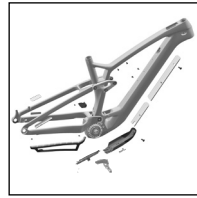
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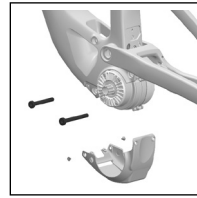
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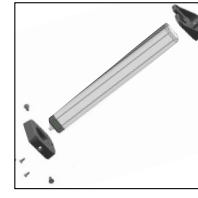
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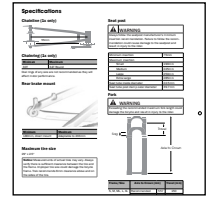
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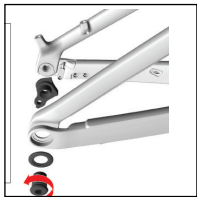
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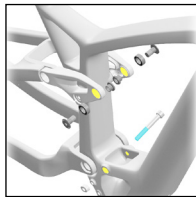
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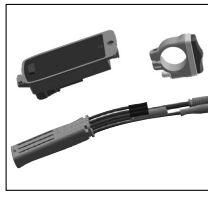
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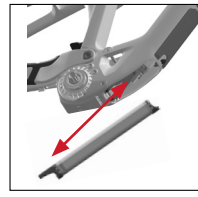
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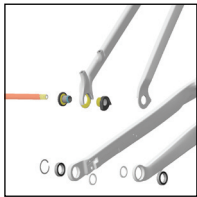
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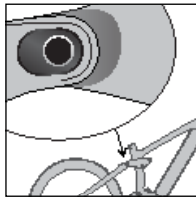
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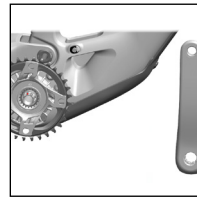
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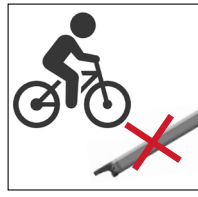
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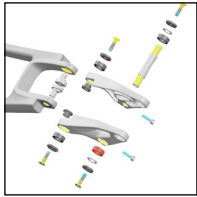
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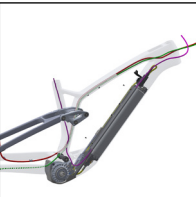
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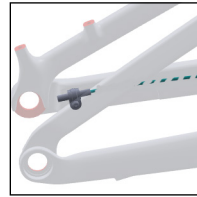
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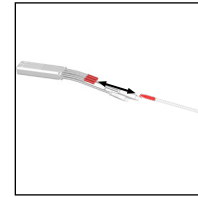
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# Safety

## WARNING

### Properly tighten hardware

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

### Reapply threadlocker

All reused-fasteners with pre-applied threadlocker must be cleaned with isopropyl alcohol and have new threadlocker applied before re-assembly. If 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



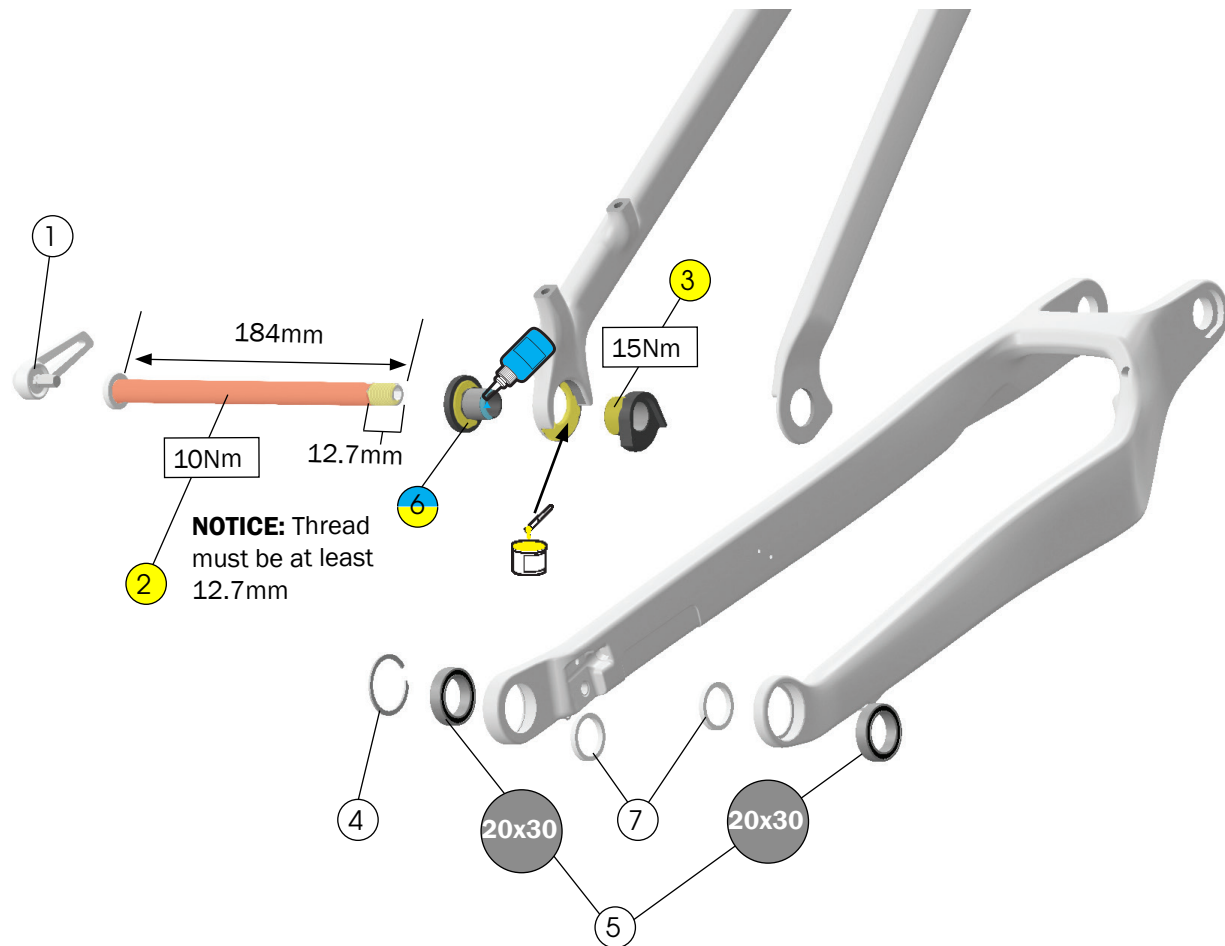
Zip tie







# 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](#)

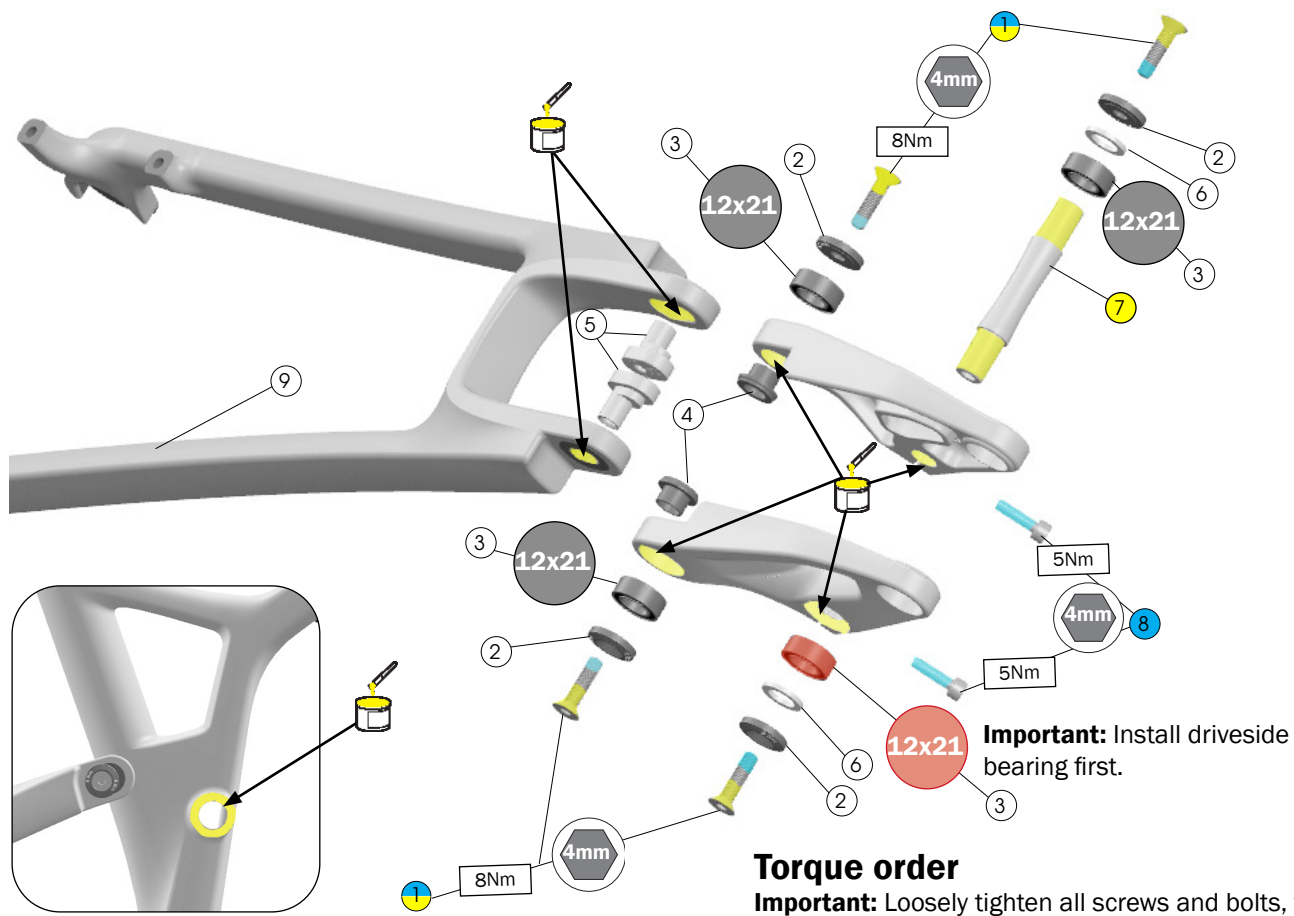
– [W5272776](#)

## Tools

- Bearing press
- Cassette lockring tool
- Grease
- Threadlocker



# Rocker pivot and seatstay



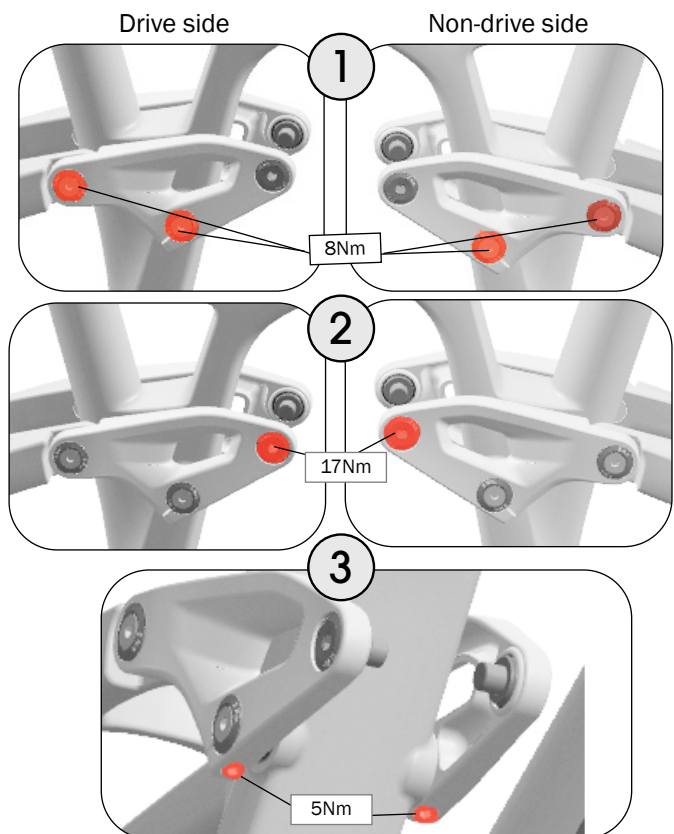
## Torque order

**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.

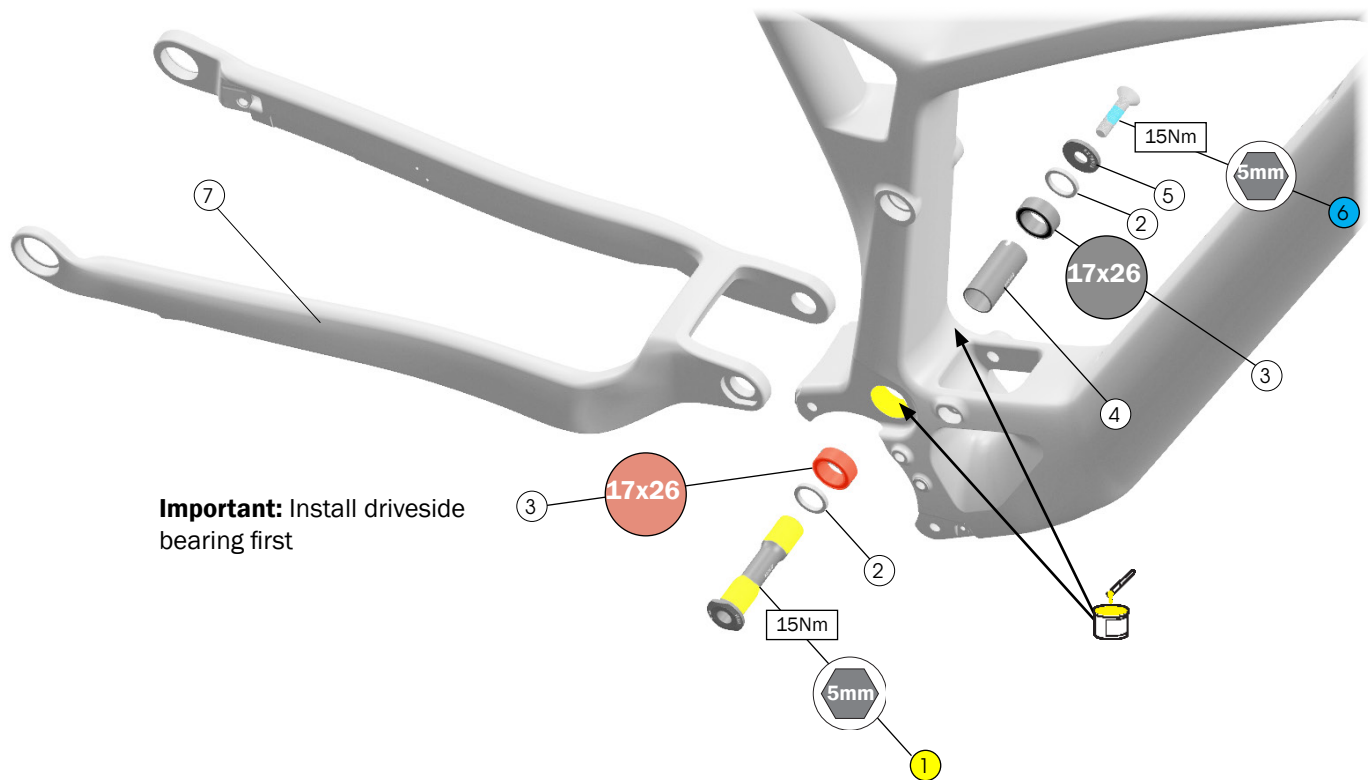
- 1 Screws – [W5270150](#)
- 2 Concave washers – [W5270027](#)
- 3 Bearings – [W5256341](#)
- 4 Hat style washers – [W5270030](#)
- 5 Mino link nuts – [W5270028](#)
- 6 Frame spacers – [W290057](#)
- 7 Rocker pivot axle – [W5271369](#)
- 8 Rocker link pinch bolts – [W5256244](#)
- 9 Seatstay – [40468](#)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

## Tools

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



# Main pivot and chainstay



**Important:** Install driveside bearing first

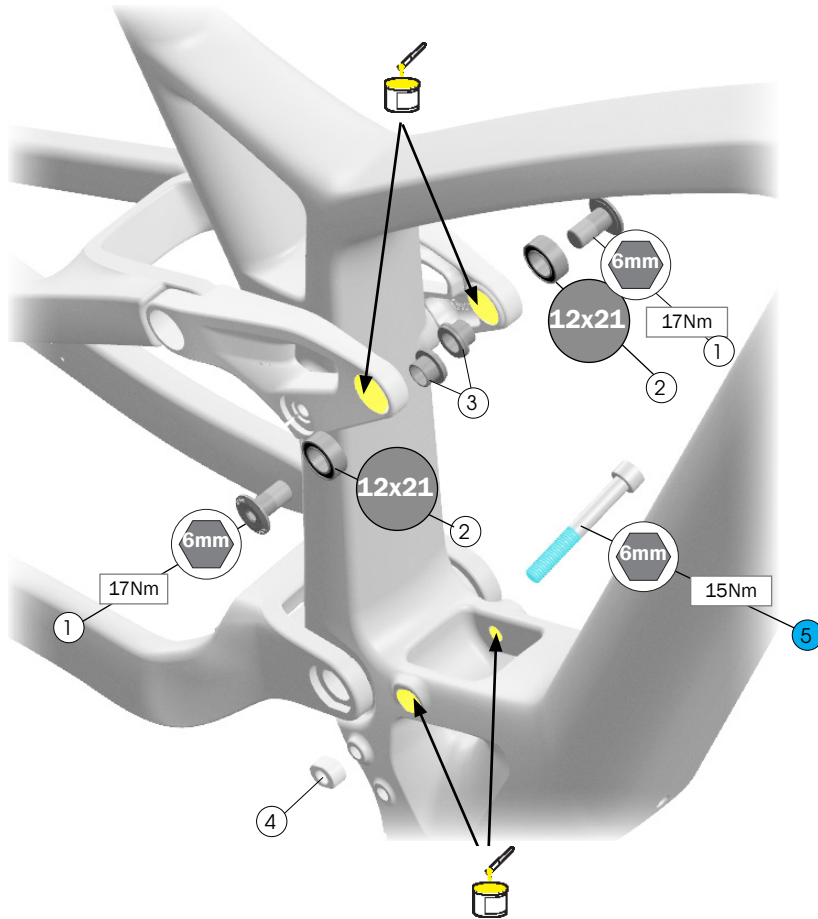
- ① Main pivot axle – [W5270022](#)
- ② Frame spacers – [W440921](#)
- ③ Bearings – [W5256338](#)
- ④ Main pivot sleeve – [W600642](#)
- ⑤ Concave washers – [W5270024](#)
- ⑥ Screws – [W5270149](#)
- ⑦ Chainstay – [40466](#)  
Search [trekbikes.com](#) to find the color-matched part for your bike.

## 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: 205mm

Stroke length: 60mm

Upper width: 54mm x 10mm

Lower width: 40mm x 8mm

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

## Tools

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

## Setup

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

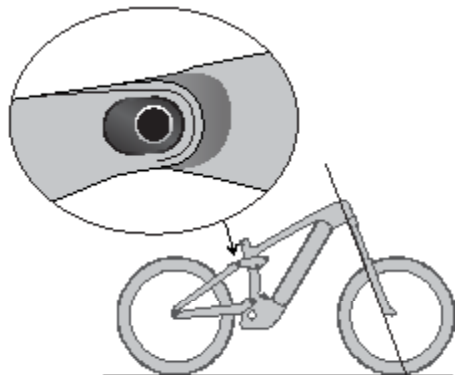
Refer to the suspension setup card included with your bike or the suspension calculator at [trekbikes.com/suspension-calculator](http://trekbikes.com/suspension-calculator).

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

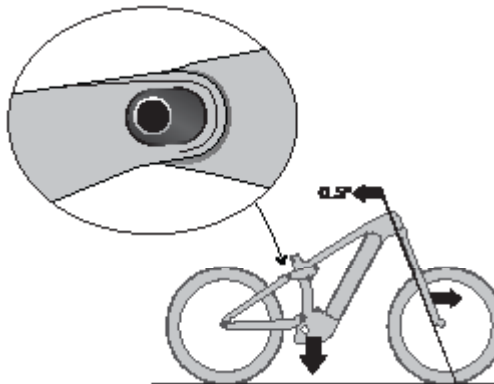
## Steeper head tube angle



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

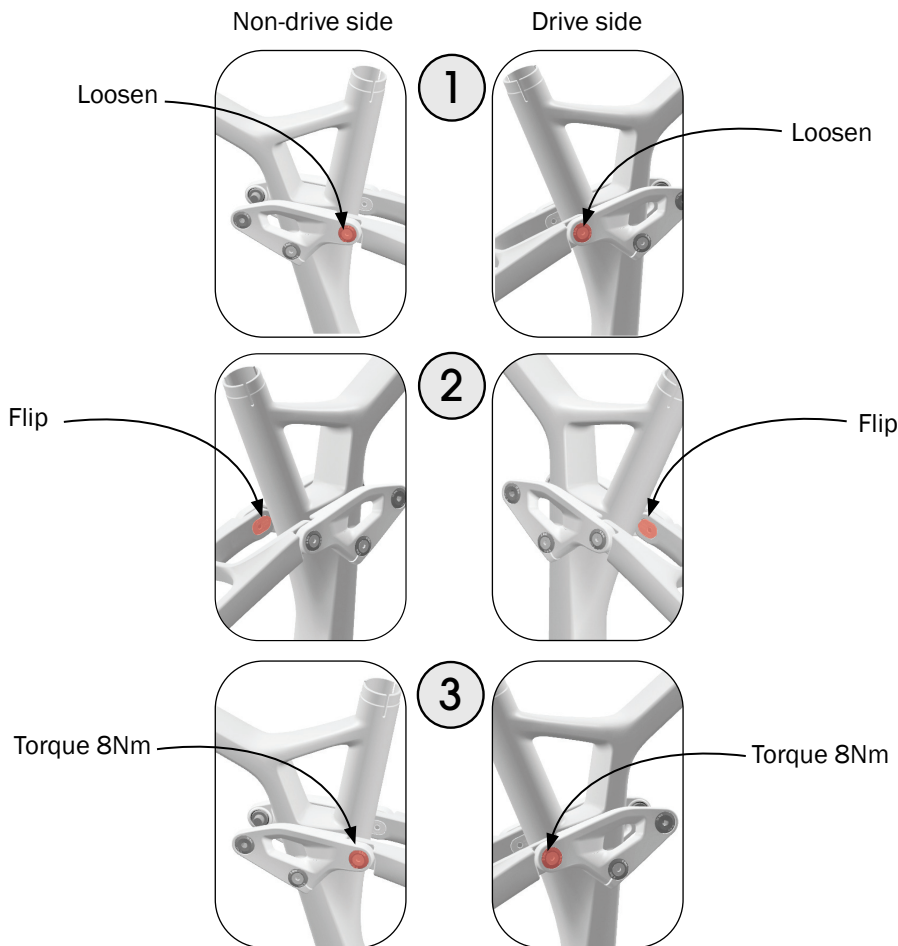


Mino link in the low position

- 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 9mm for more stability

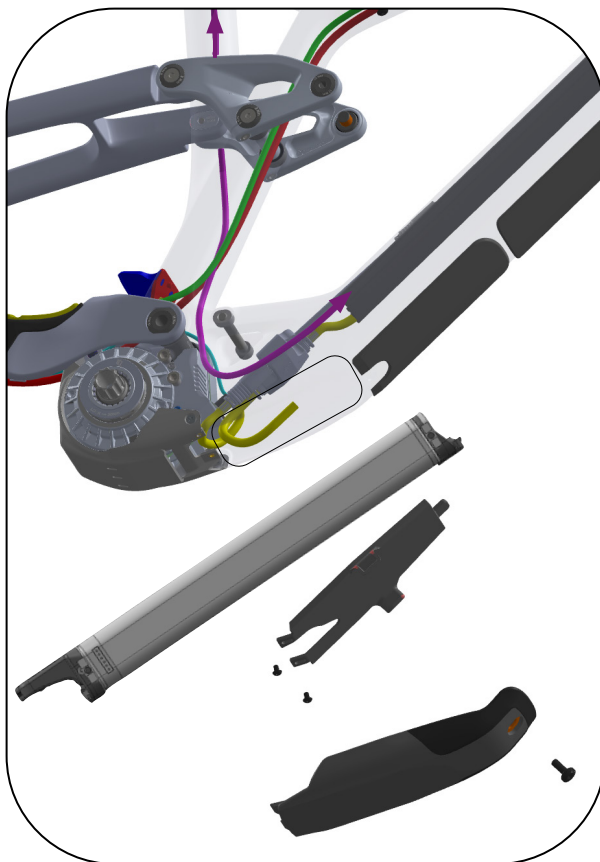
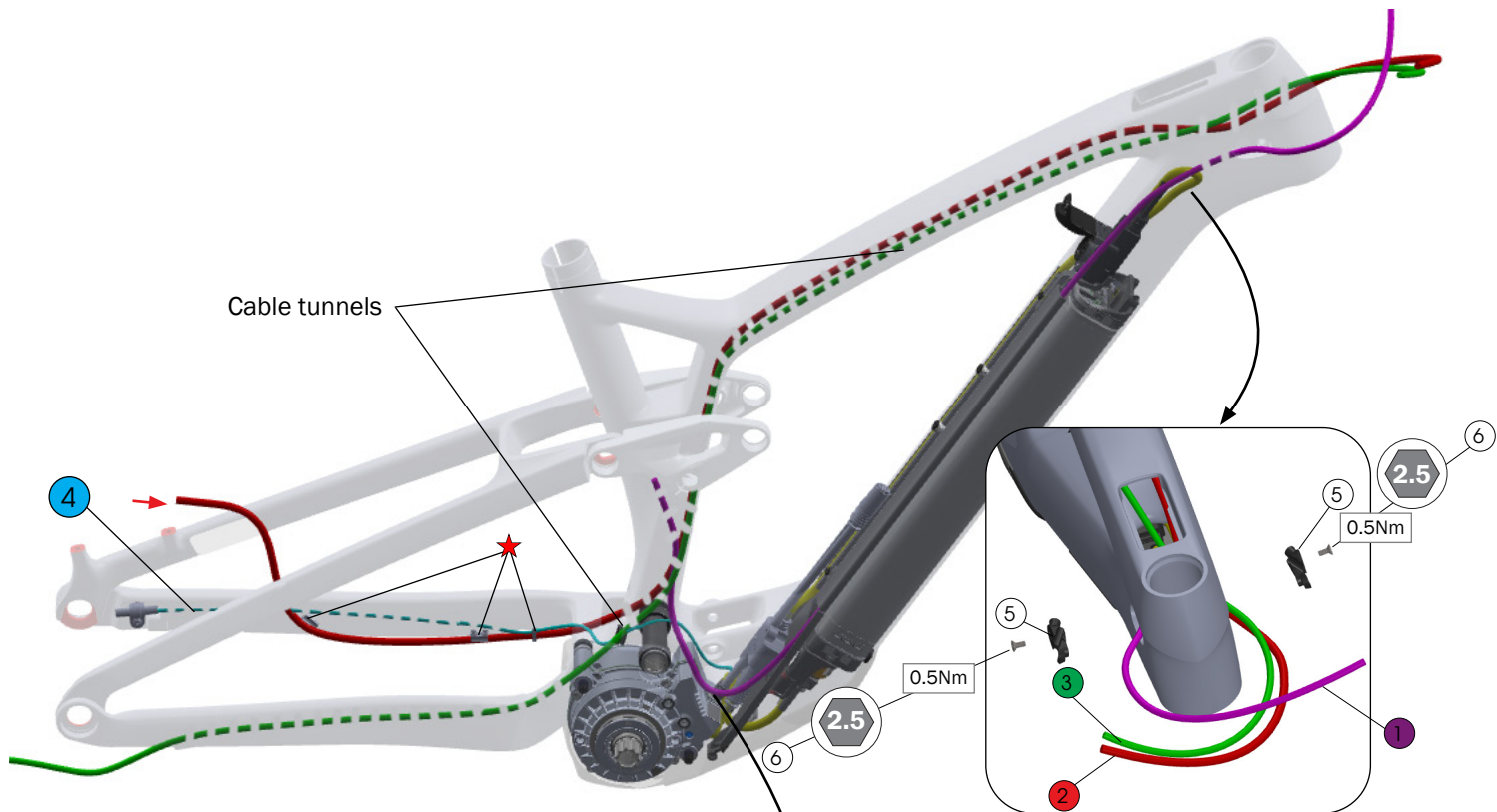
## Tools

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





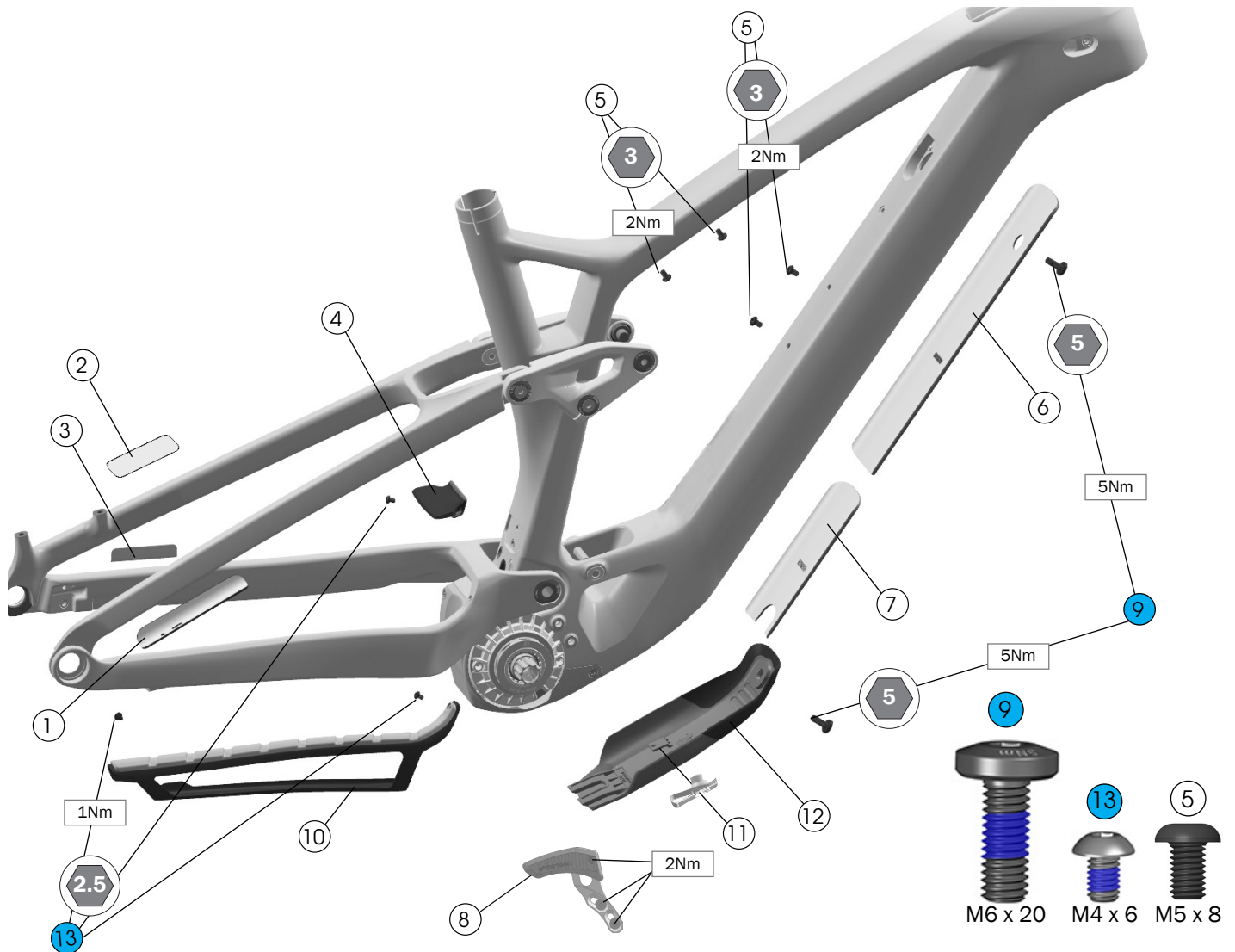
# Brake, derailleur, and dropper post routing



**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 Seatstay adhesive guard – [W5271371](#)
- ② Brake hose adhesive guard – [W326986](#)
- ③ Rotor guard – [W580881](#)
  1. To improve adhesion, use sandpaper to roughen the backside 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 Down tube 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

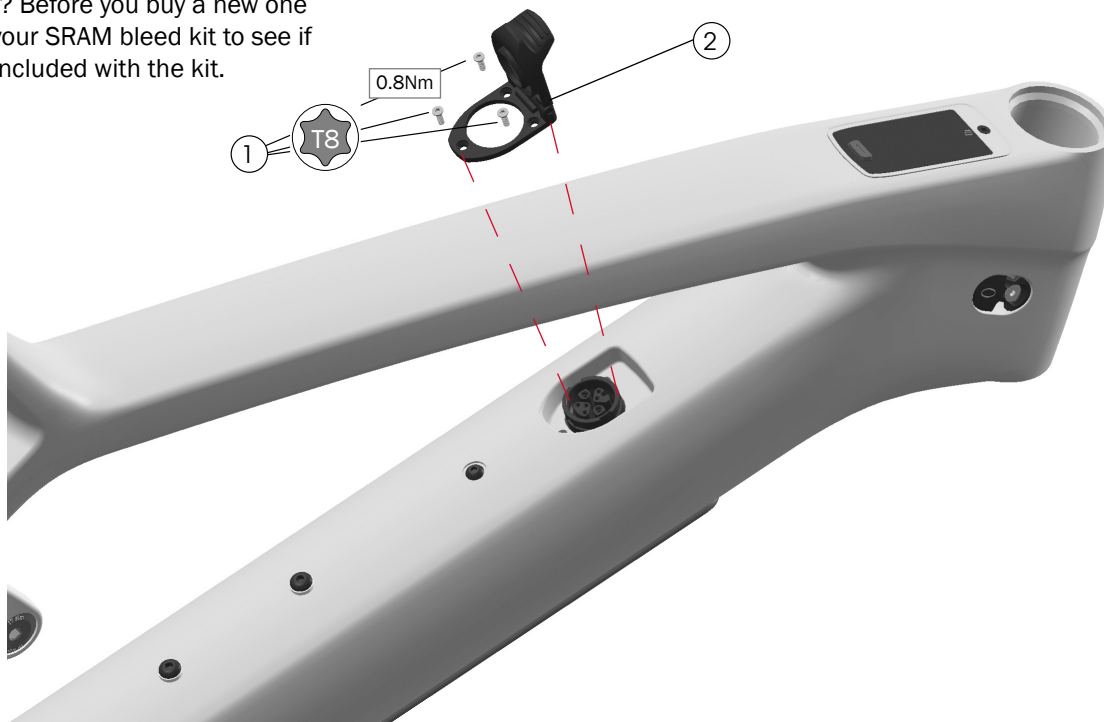
Use isopropyl alcohol to clean the frame surface where the guard attaches. Wait for the alcohol to dry before applying the guard.

**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.

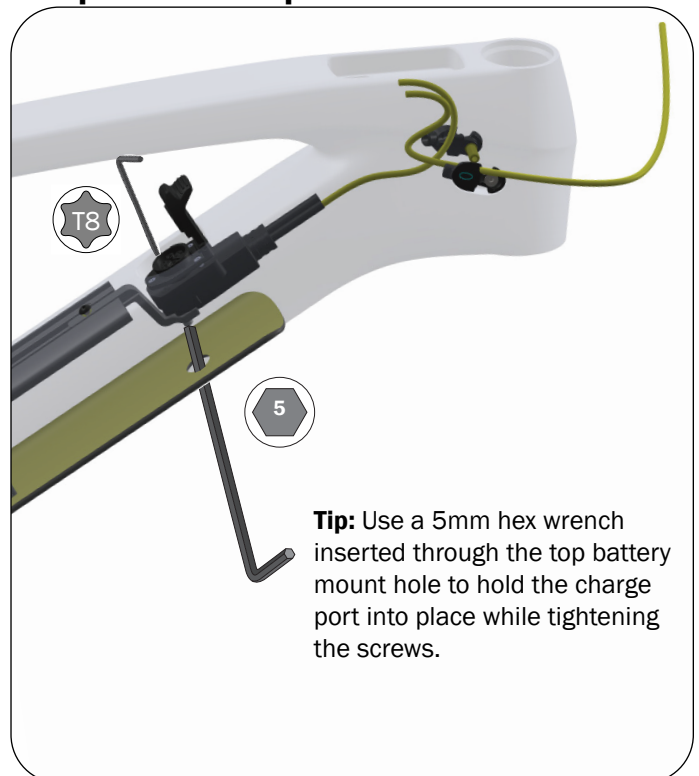


- ① Bolts — [5305632](#)
  - ② Charge port cover
- [5289578](#)

### Tools

- T8 Torx wrench
- 5mm hex wrench

### Replacement tip

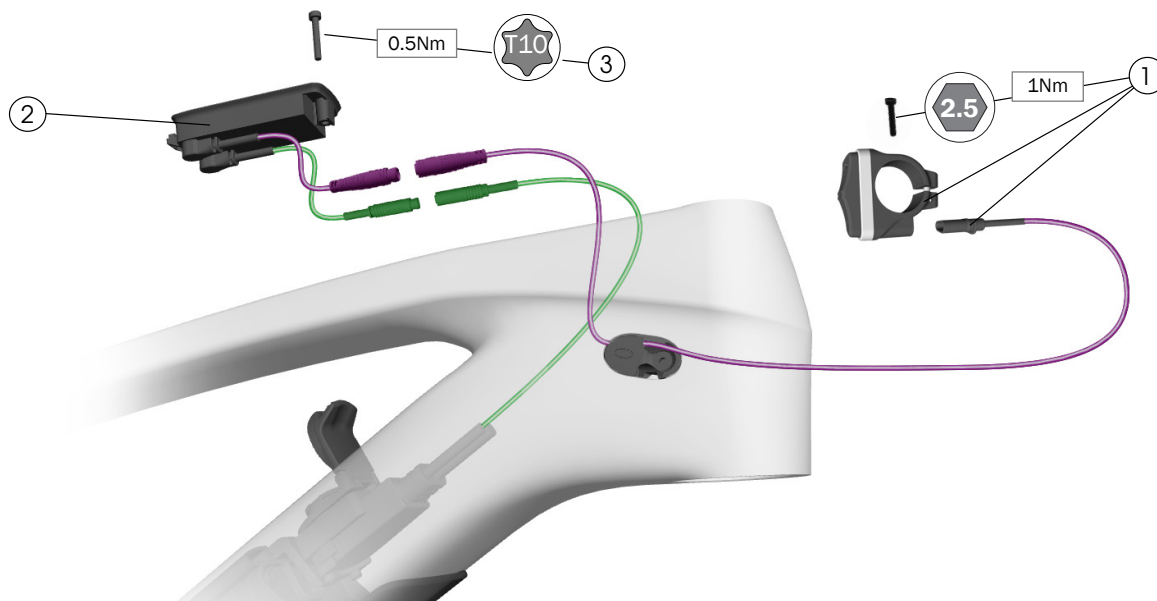


# Remote, display, and Smart Box

## For detailed service instructions:

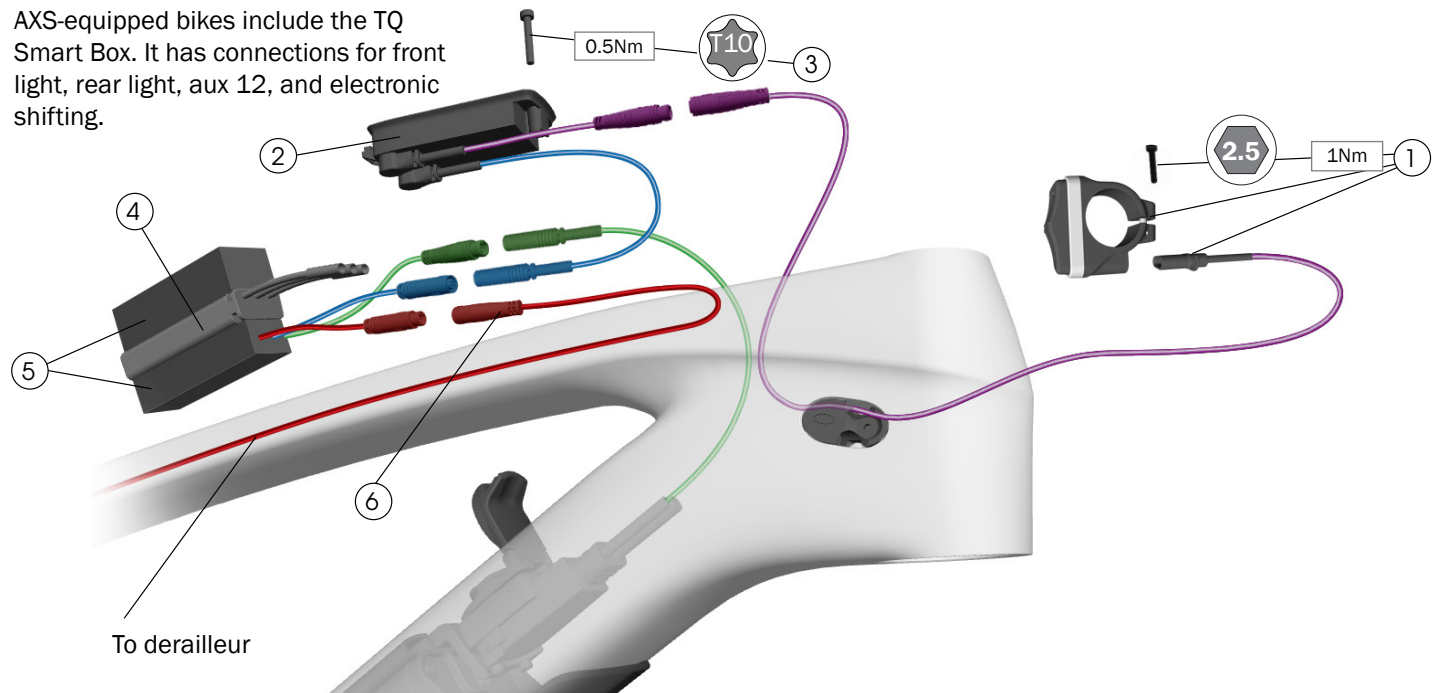
Refer to the TQ service manuals found on [tq-ebike.com/en/support/manuals](http://tq-ebike.com/en/support/manuals).

### 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 – [5289561](#)

② Display – [5289562](#)

③ Socket head bolt – [5305631](#)

– 5289562

④ Smart box – [5289564](#)

⑤ Foam blocks, set of two – [5305634](#)

⑥ AXS derailleur cable – [5289566](#)

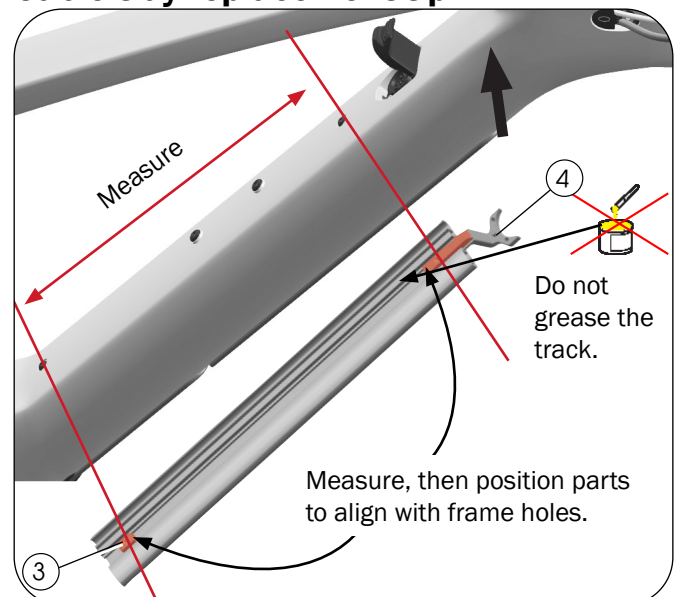


# Wiring harness and cable tray organizer



- 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

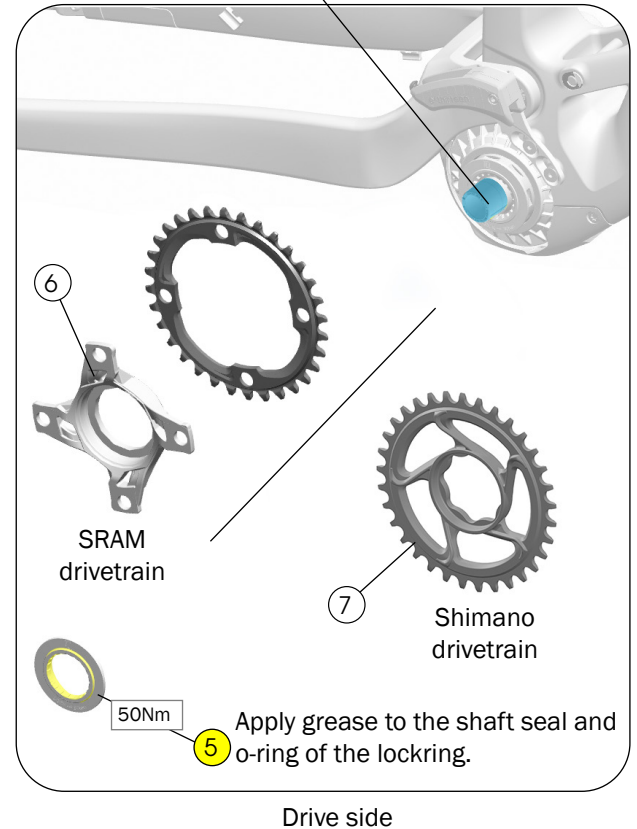
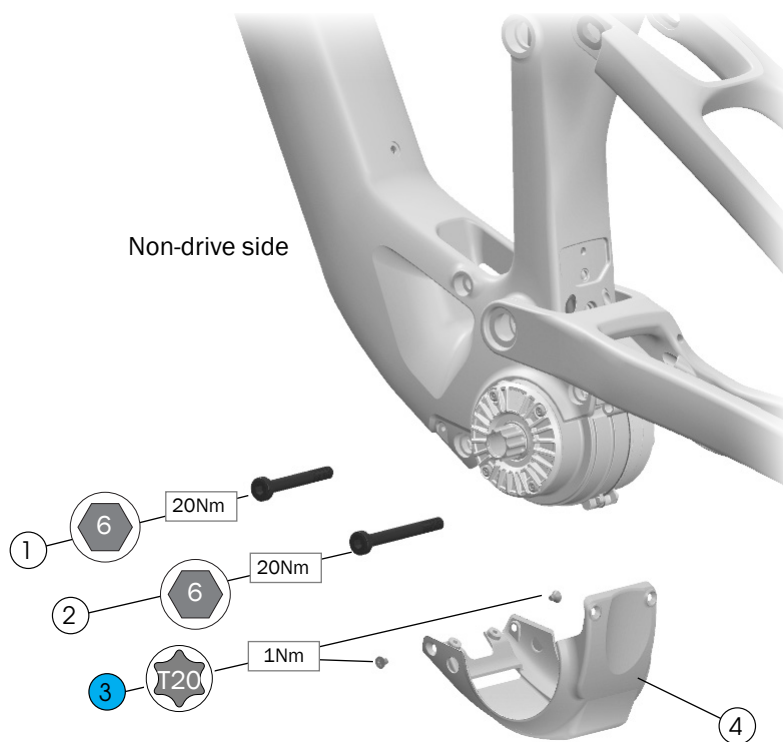


# Drive unit

## 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 chainring (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

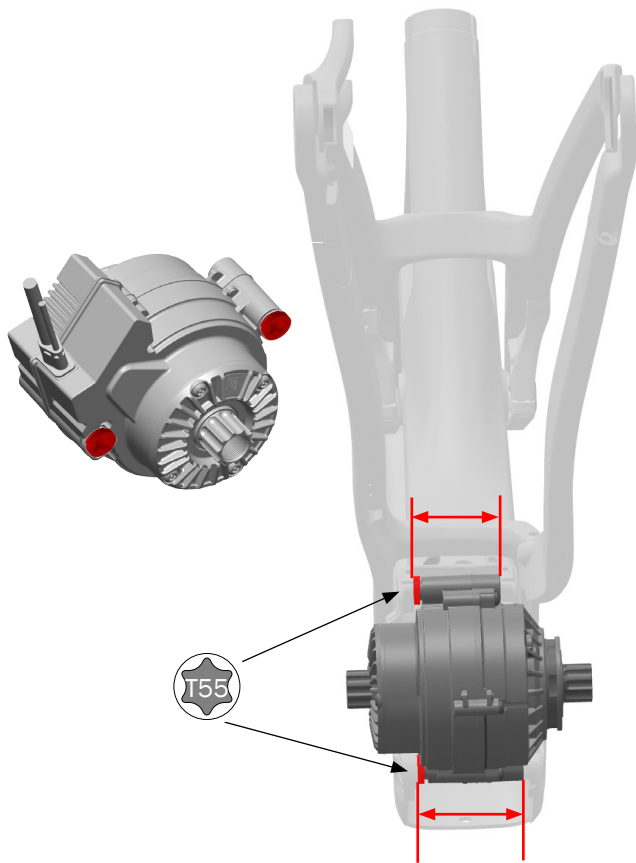
- 6mm hex wrench
- T20 Torx wrench
- Torque wrench with 6mm bit
- BB-UN55 bottom bracket tool – part number 536183

- |   |   |                             |
|---|---|-----------------------------|
| 1 | Front motor bolt, 73mm  | } – <a href="#">5289570</a> |
| 2 | Rear motor bolt, 62mm   |                             |
| 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

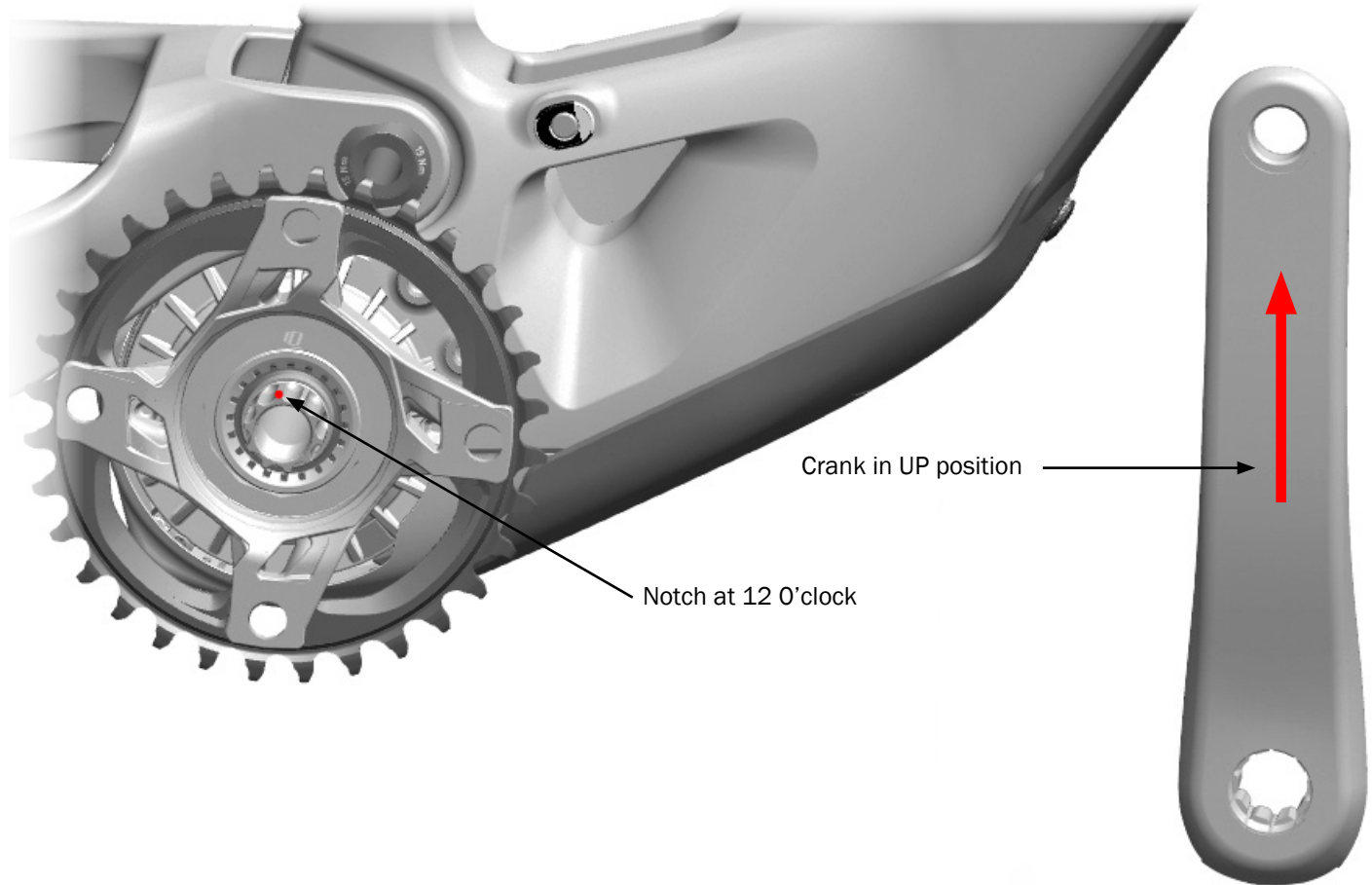


**NOTE:** Only adjust the compensation screws if you are replacing the drive unit.

## 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.



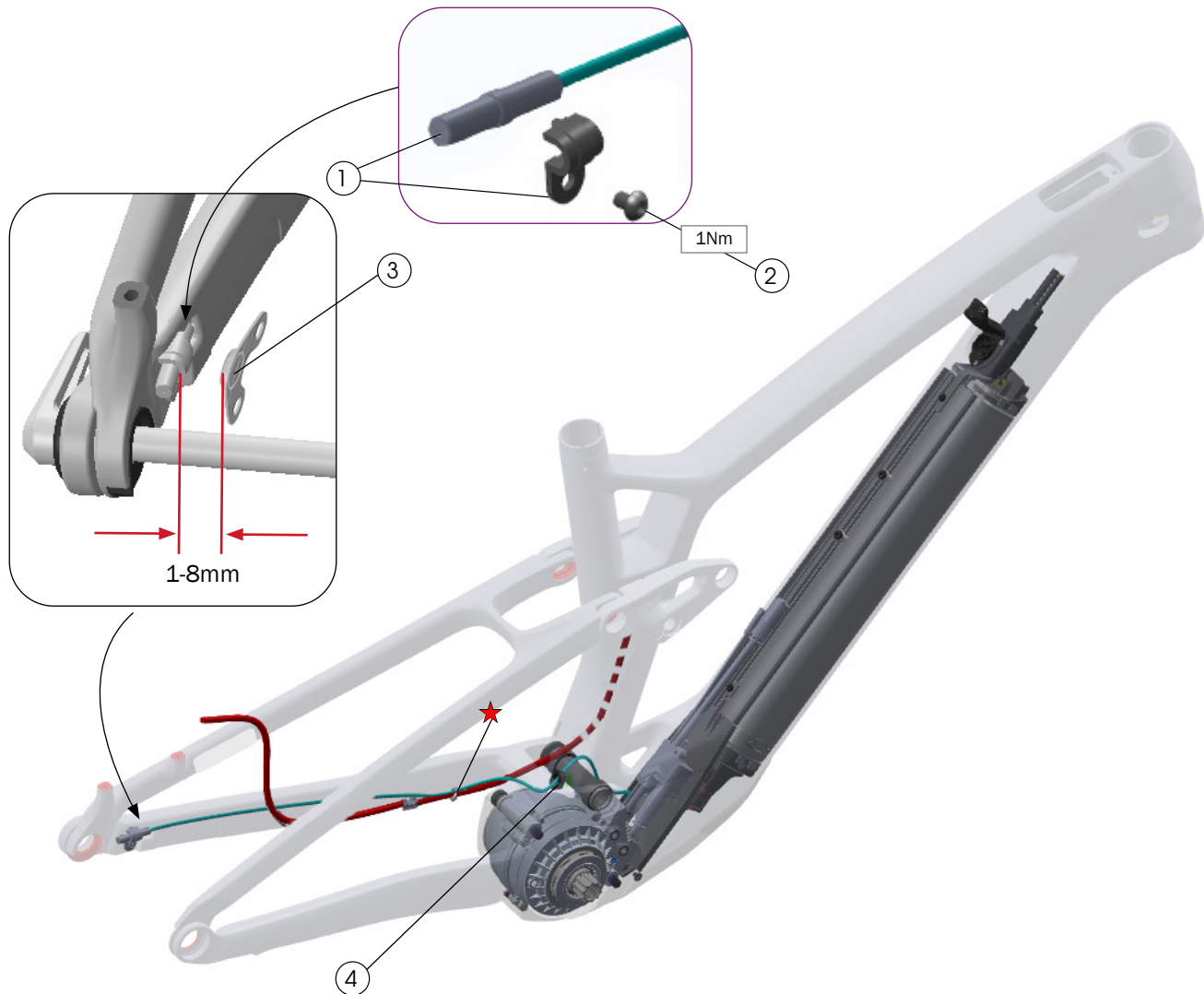
1. Locate the notch on the spindle. There are notches on the driveside and non-driveside.
2. Rotate the spindle until one notch is at the 12 o'clock position.
3. Install the crank in the up position.



# 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 6mm – [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.

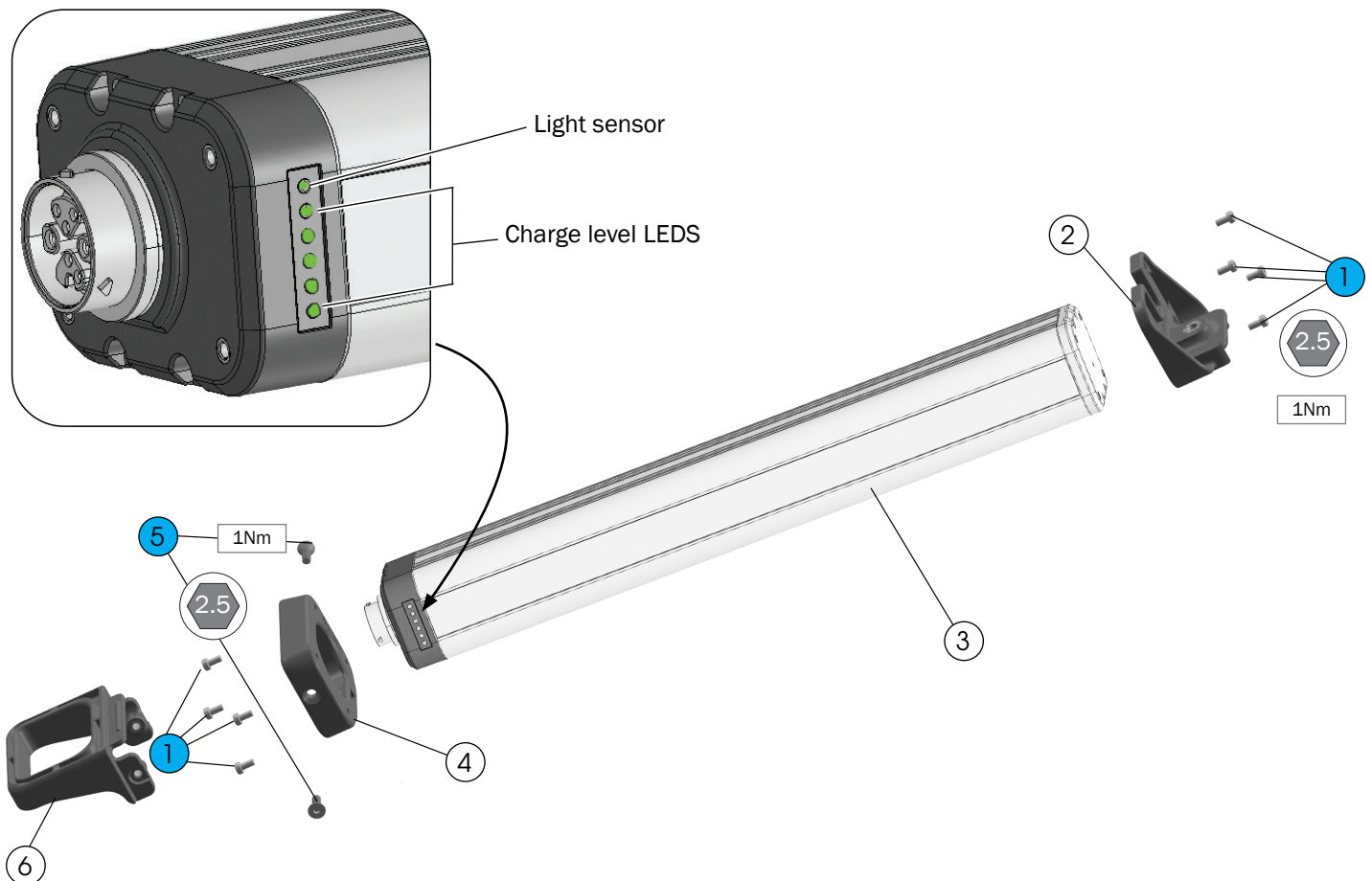
## Replacement tip

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

- 2.5mm hex tool

## Assembly

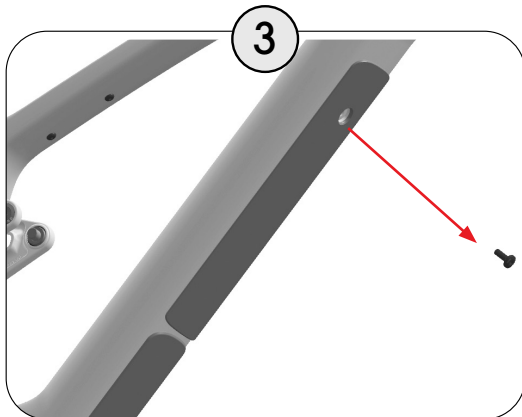
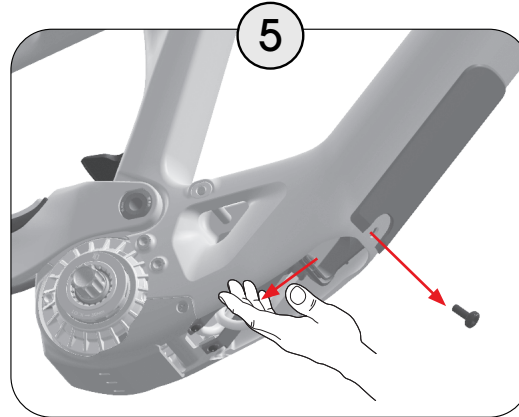
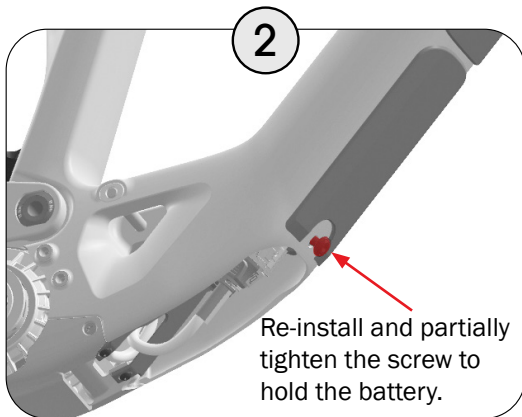
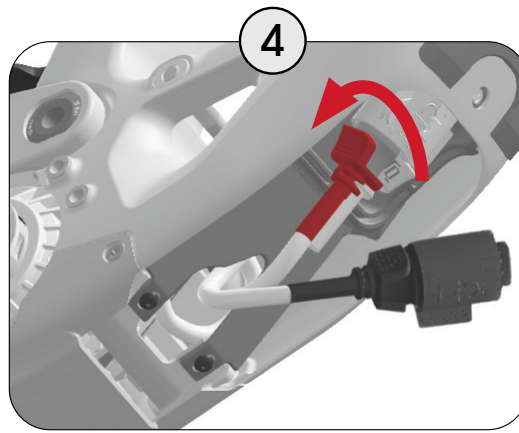
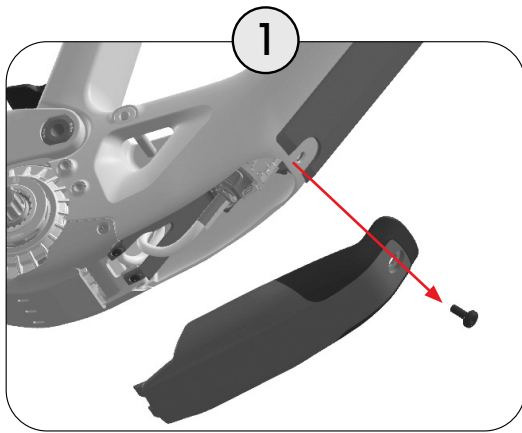
**Notice:** Assemble the handle in the orientation shown above, and with the battery positioned so the LEDs will be on the drive side. The battery will not install properly if it is assembled incorrectly.

## 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



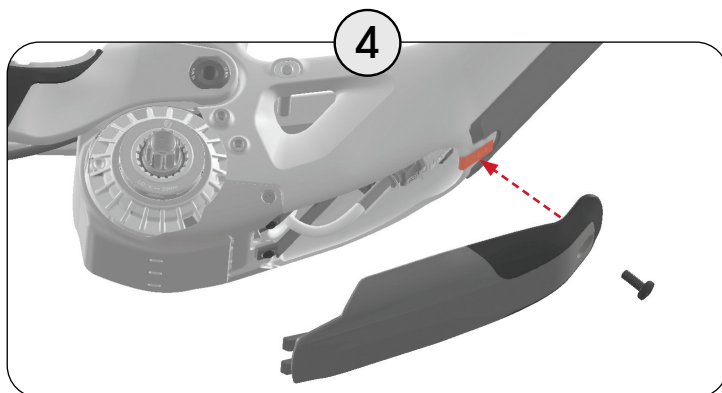
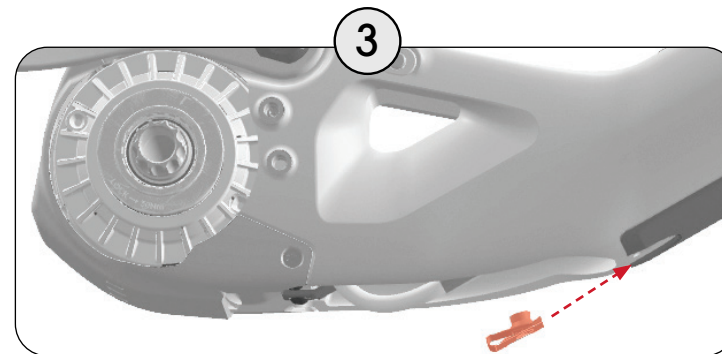
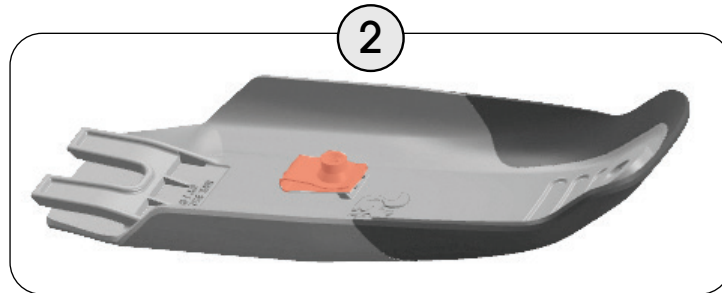
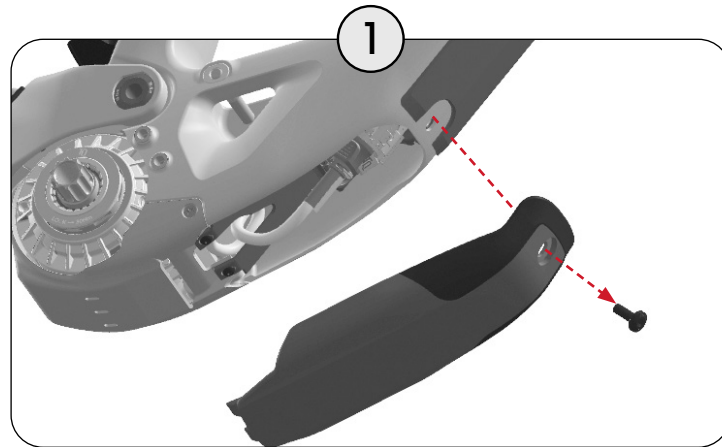
**NOTICE:** Guide the battery out of the frame. When the last battery mount screw is removed, the battery will slide out of the frame. To prevent the battery from falling, place one hand under the battery to support it while removing the last screw.

## 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 5Nm.

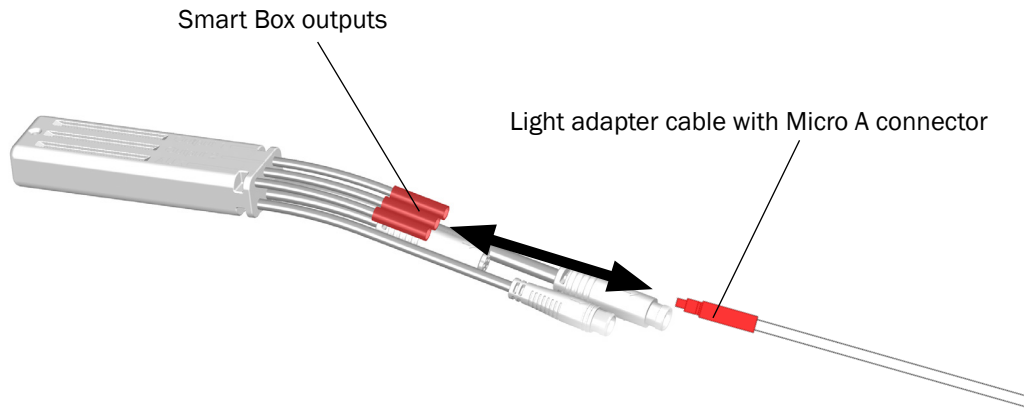
## Ride the bike without the battery

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 batter cover.





## Connect lights to the TQ Smart Box

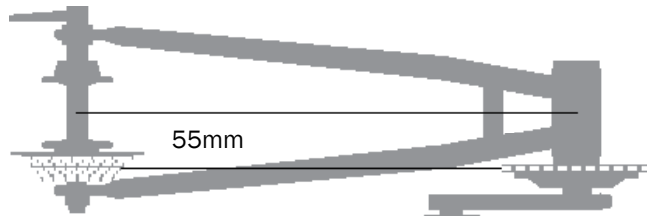


Lights can be connected to the TQ smart box and powered by the bike battery. The Smartbox power outputs must be activated via the Dealer Service Tool.

- **Maximum power (front and rear light combined):** 20W at 12V.
- **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

## Chainline (1x only)

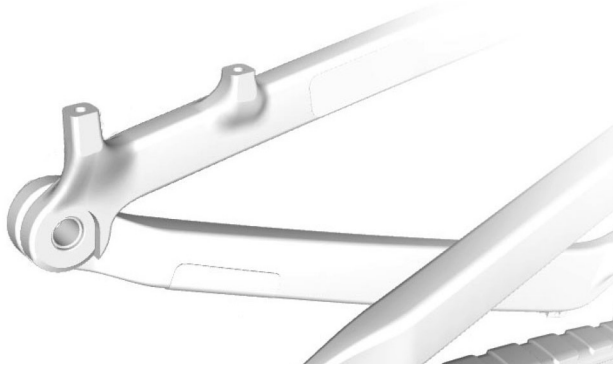


## Chainring (1x only)

Minimum	Maximum
30T	34T Round

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

## Rear brake mount



Minimum	Maximum
180mm, direct mount	Adaptable to 203mm

## Maximum tire size

29" x 2.5"

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

## Seat post

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

Minimum insertion 75mm

Maximum insertion

Small 190mm

Medium 225mm

Large 250mm

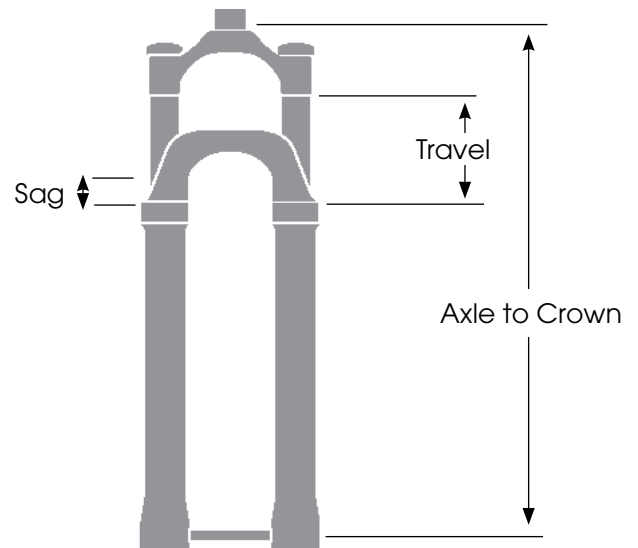
Extra Large 285mm

Seat tube inside diameter 34.9mm

Seat tube post clamp outer diameter 39.7mm

## 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 setup card included with your bike or the suspension calculator at [Trek bikes.com/suspension-calculator](https://trekbikes.com/suspension-calculator).