

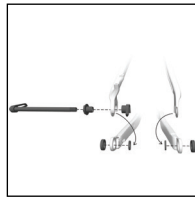
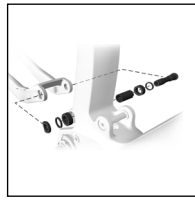
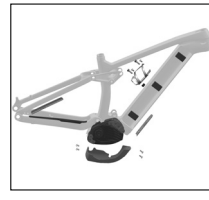
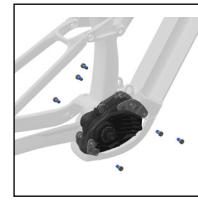
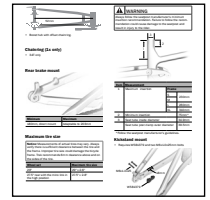
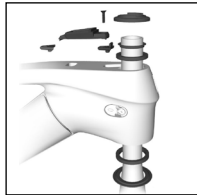
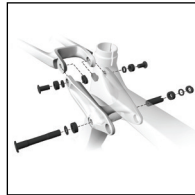


# 2022 and 2023 Carbon Rail

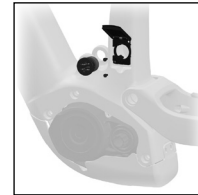
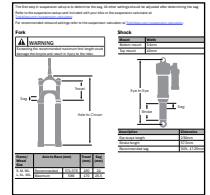
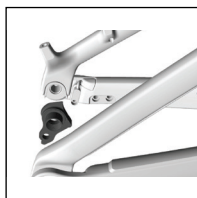
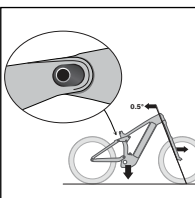
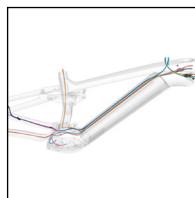
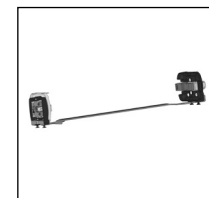
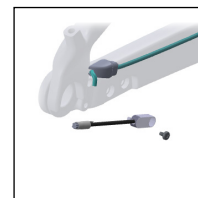
## 9.8 and 9.9 Gen 3

SERVICE MANUAL SUPPLEMENT  
Rev 3 January 2023

# Contents


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Pivot \(ABP\)](#)

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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 size



Torx tool

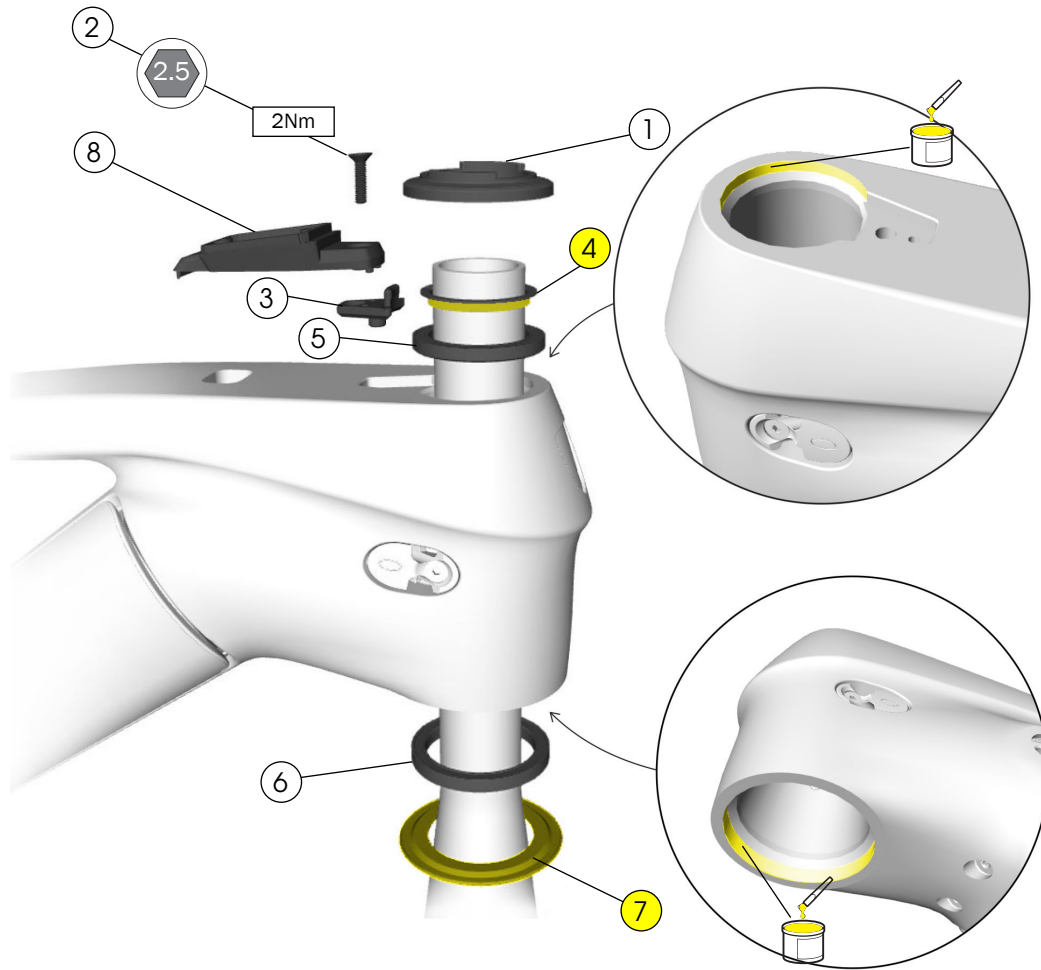


Drift size



Zip tie

# Headset with Knock Block

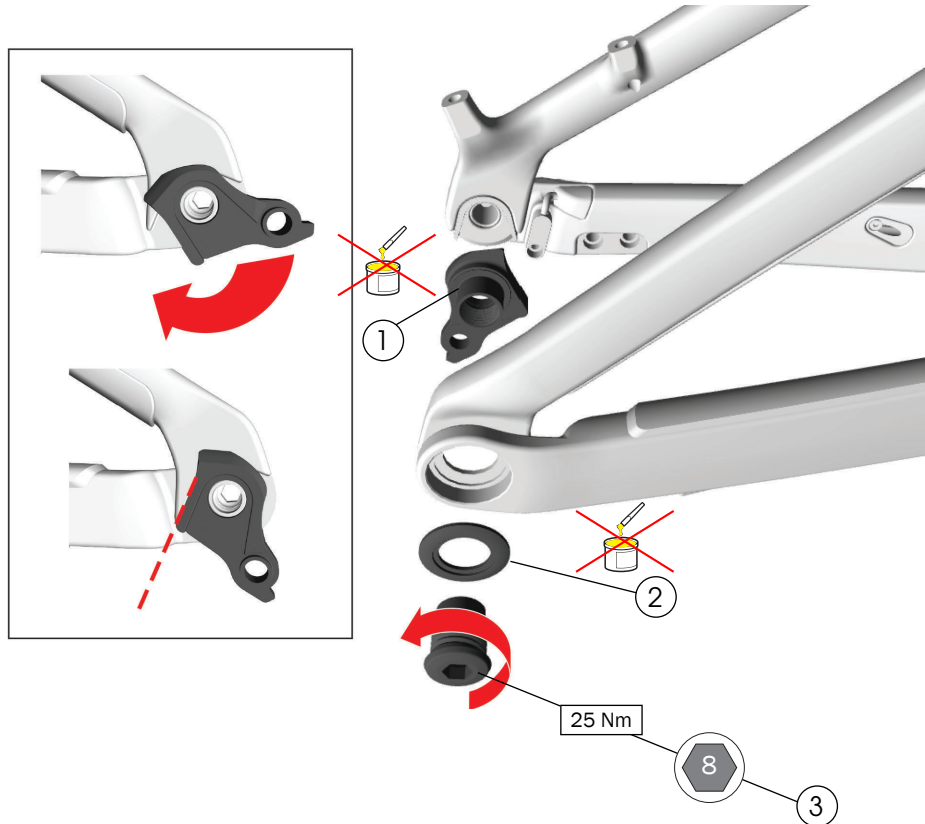


- |   |  |                                  |
|---|--|----------------------------------|
| <ul style="list-style-type: none"> <li>① Upper bearing cover</li> <li>② Chip bolt</li> <li>③ Knock Block chip – <a href="#">W532763</a></li> <li>④ Compression ring – <a href="#">W532842</a></li> <li>⑤ Upper bearing – <a href="#">W531676</a></li> <li>⑥ Lower bearing, 1.8" diameter. – <a href="#">W5269809</a></li> <li>⑦ Crown race, for 1.8" diameter lower bearing – <a href="#">W5283203</a></li> <li>⑧ Display mount – <a href="#">W5254476</a></li> </ul> | <div style="font-size: 3em; line-height: 1;">}</div> | <p>– <a href="#">5252161</a></p> |
|---|--|----------------------------------|

## Tools

- 2.5 mm hex tool
- Grease

# Dérailleur hanger



① Dérailleur hanger

② Washer

③ Bolt

- [W5271425](#)

## Tools

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



## WARNING

Do not apply grease to the derailleur hanger or bolt. Only apply grease to the thru axle.

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

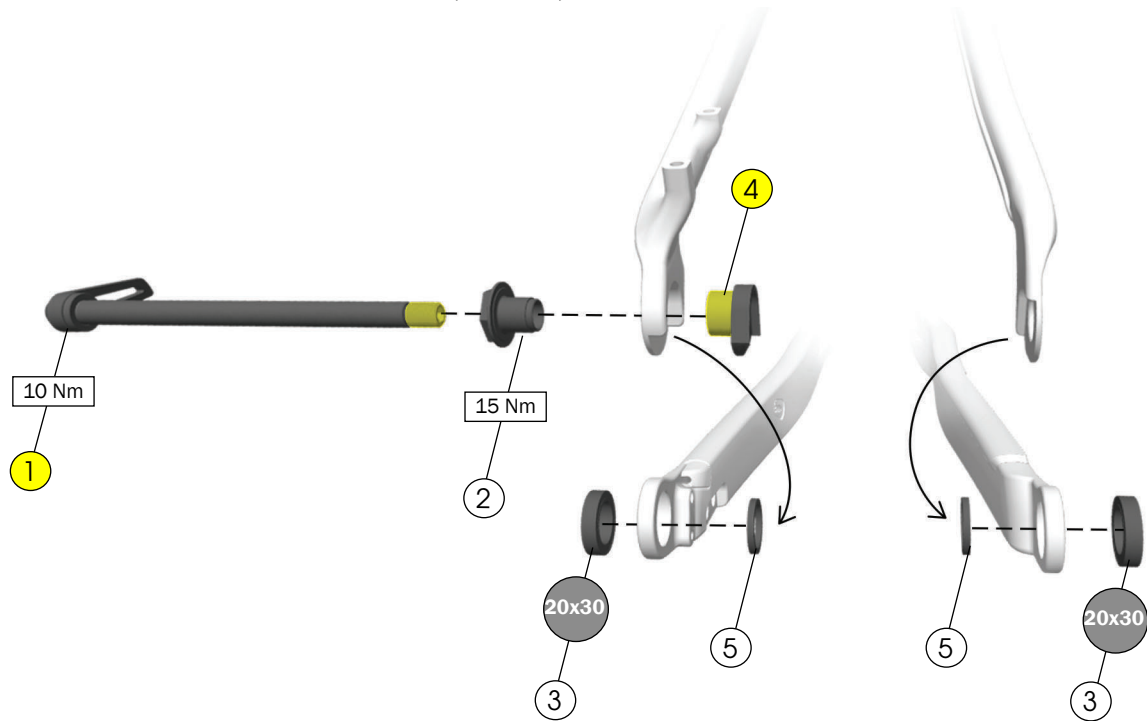
**NOTICE:** The thru axle must be compatible with a UDH and must be M12x1.0 with a 12.7 mm thread.

**NOTICE:** The washer is frame-specific. Install only the washer compatible with your frame.

**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 [www.sram.com](http://www.sram.com).

# Active Braking Pivot (ABP)



- ① Thru axle – [W583470](#)
  - ② Non-driveside dropout – [W583420](#)
  - ③ Bearings – [W583424](#)
  - ④ Dropout axle – [W583419](#)
  - ⑤ Spacers – [W583422](#)
- [599911](#)

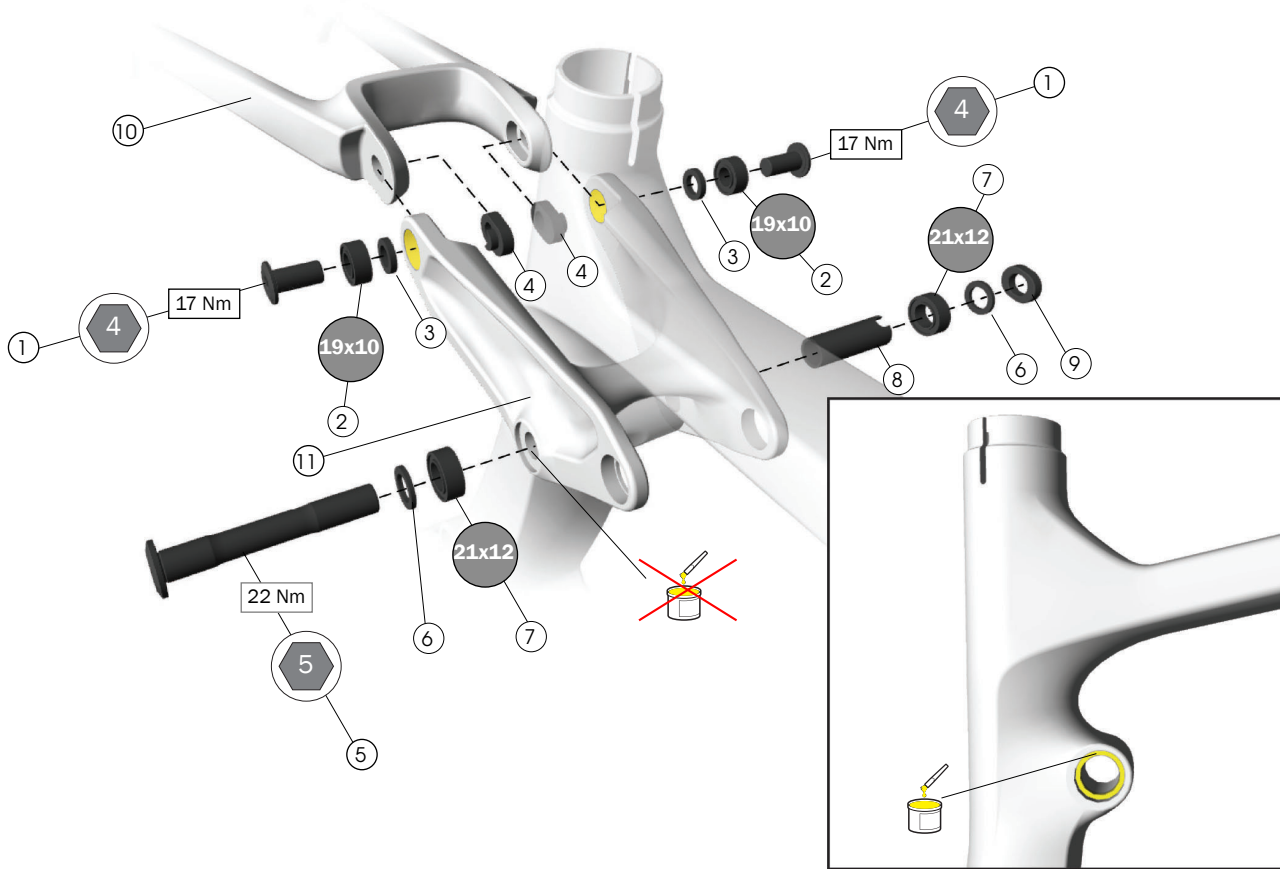
## Tools

- Bearing press, 20x30 drift
- Cassette lockring
- Grease

**NOTICE:** The thru axle must be compatible with a UDH and must be M12x1.0 with a 12.7 mm thread.



# Rocker pivot and seat stay



- ① Bolts – [W600629](#)
  - ② Bearings – [W529224](#)
  - ③ Spacers – [W529969](#)
  - ④ Mino link – [W529223](#)
  - ⑤ Rocker axle – [W535469](#)
  - ⑥ Spacers – [W290057](#)
  - ⑦ Bearings – [W586543](#)
  - ⑧ Seat tube pivot sleeve – [W310155](#)
  - ⑨ Nut – [W311582](#)
  - ⑩ Seatstay – [30893](#). Search [trekbikes.com](#) to find the colour-matched part for your bike.
  - ⑪ Rocker link – [30969](#). Search [trekbikes.com](#) to find the colour-matched part for your bike.
- [599910](#)

## Tools

- Bearing press, 19x10 and 21x12 drifts
- 4mm and 5mm hex wrenches
- Torque wrench with 4mm and 5mm hex bits

## Seat tube pivot

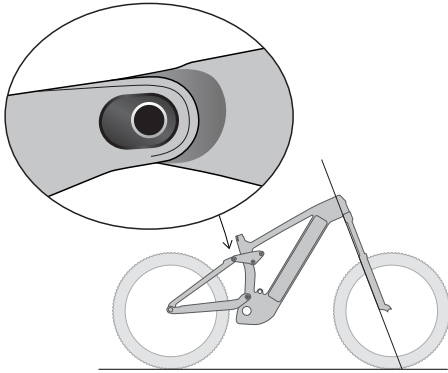
**Important:** Press in driveside bearing first.

# Adjust the geometry

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

**Notice:** If using a 29" wheel up front and a 27.5" wheel in the back, the minolink must be in the high position.

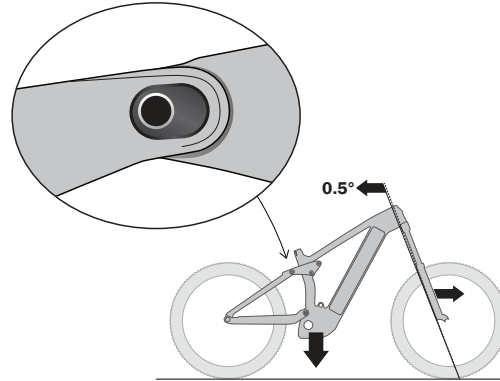
## Steeper head tube angle



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



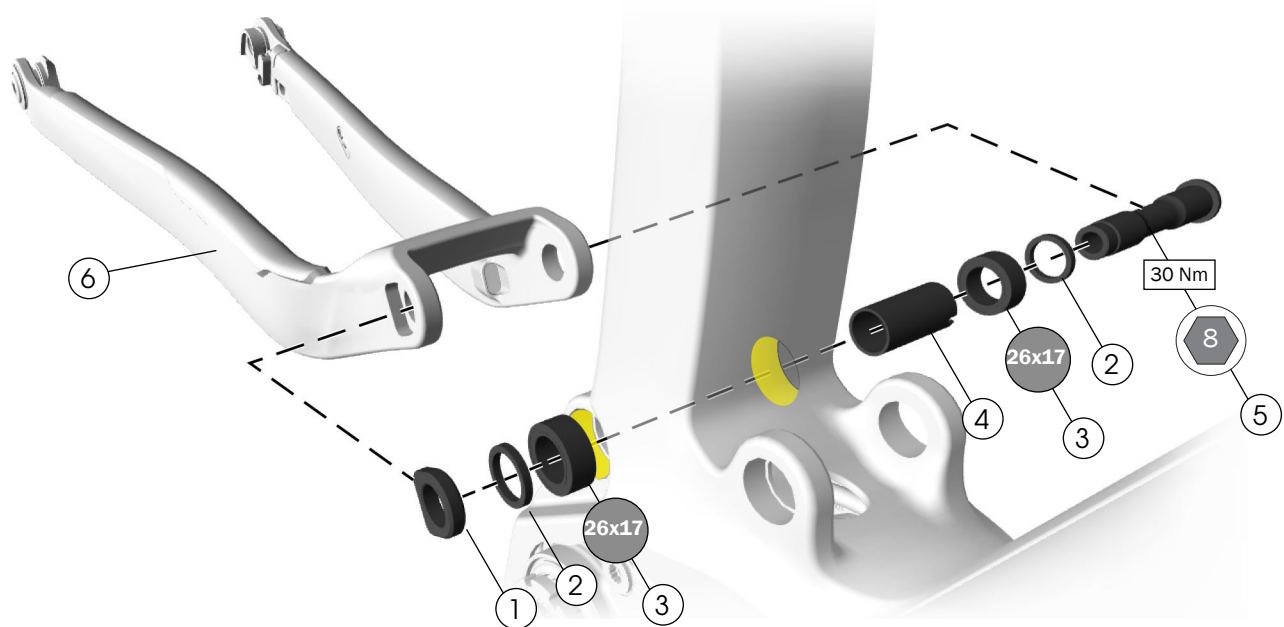
Mino link in the low position

- 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

- 5 mm hex tool
1. With the bike on the ground, loosen and remove one Mino Link chip.
  2. Loosen and remove the other Mino Link chip.
  3. Position the bike:
    - Mino Link high:** Lift the bike by the seat tube. This will pull the rear triangle up and forward.
    - Mino Link low:** With the chips removed, gravity will pull the rear triangle down and back.
  4. Place one Mino Link chip into the desired position. Slightly tighten the Mino Link bolt.
  5. Install the other Mino Link chip into the same position. Slightly tighten the Mino Link bolt.
  6. Torque both Mino Link bolts to 17Nm.

# Main pivot and chainstay



- ① Nut – [W584134](#)
  - ② Spacers – [W440921](#)
  - ③ Bearings – [W302025](#)
  - ④ Main pivot sleeve – [W500592](#)
  - ⑤ Main pivot axle – [W601376](#)
  - ⑥ Chainstay – [30891](#). Search [trekbikes.com](#) to find the colour-matched part for your bike.
- [599909](#)

## Tools

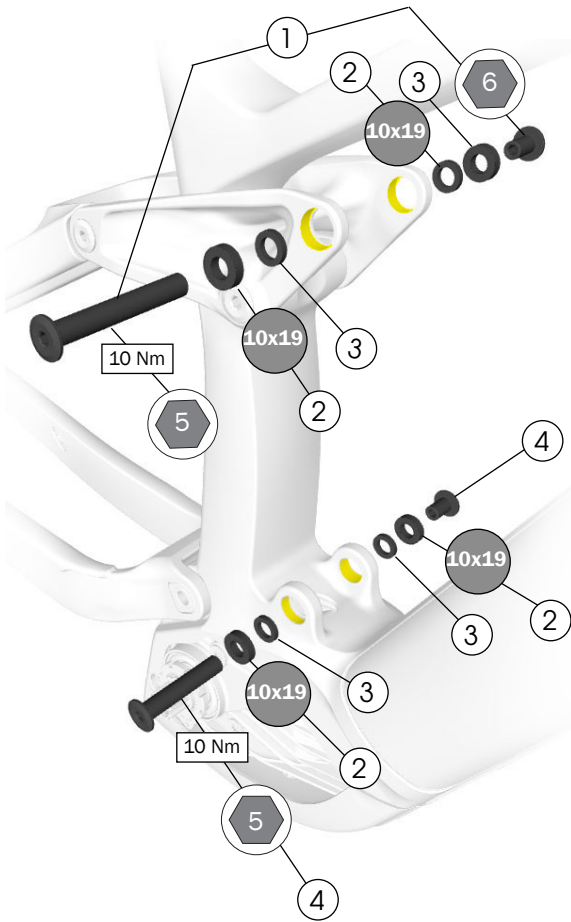
- Bearing press, 26x17 drift
- 8 mm hex tool
- Torque wrench with 8mm hex bit
- Grease

**Important:** Press in the driveside bearing first.

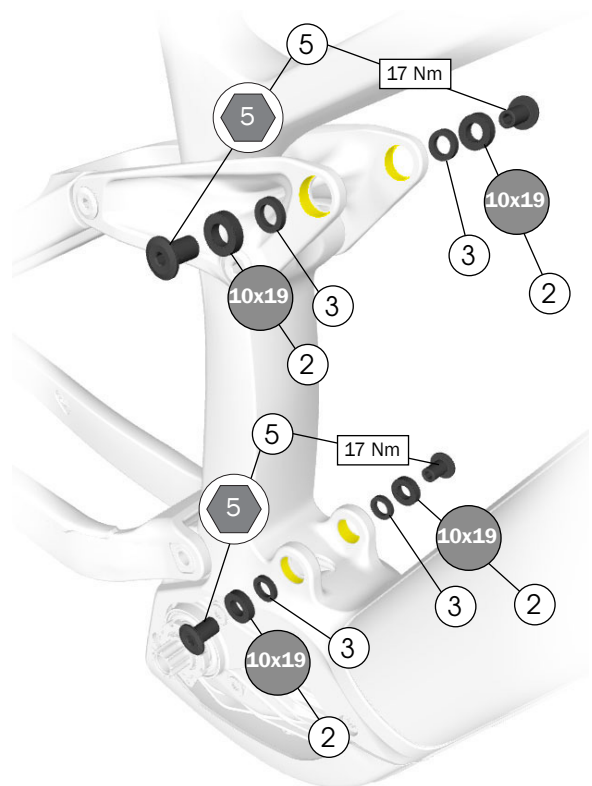


# Shock mounts

## Standard



## Thru shaft

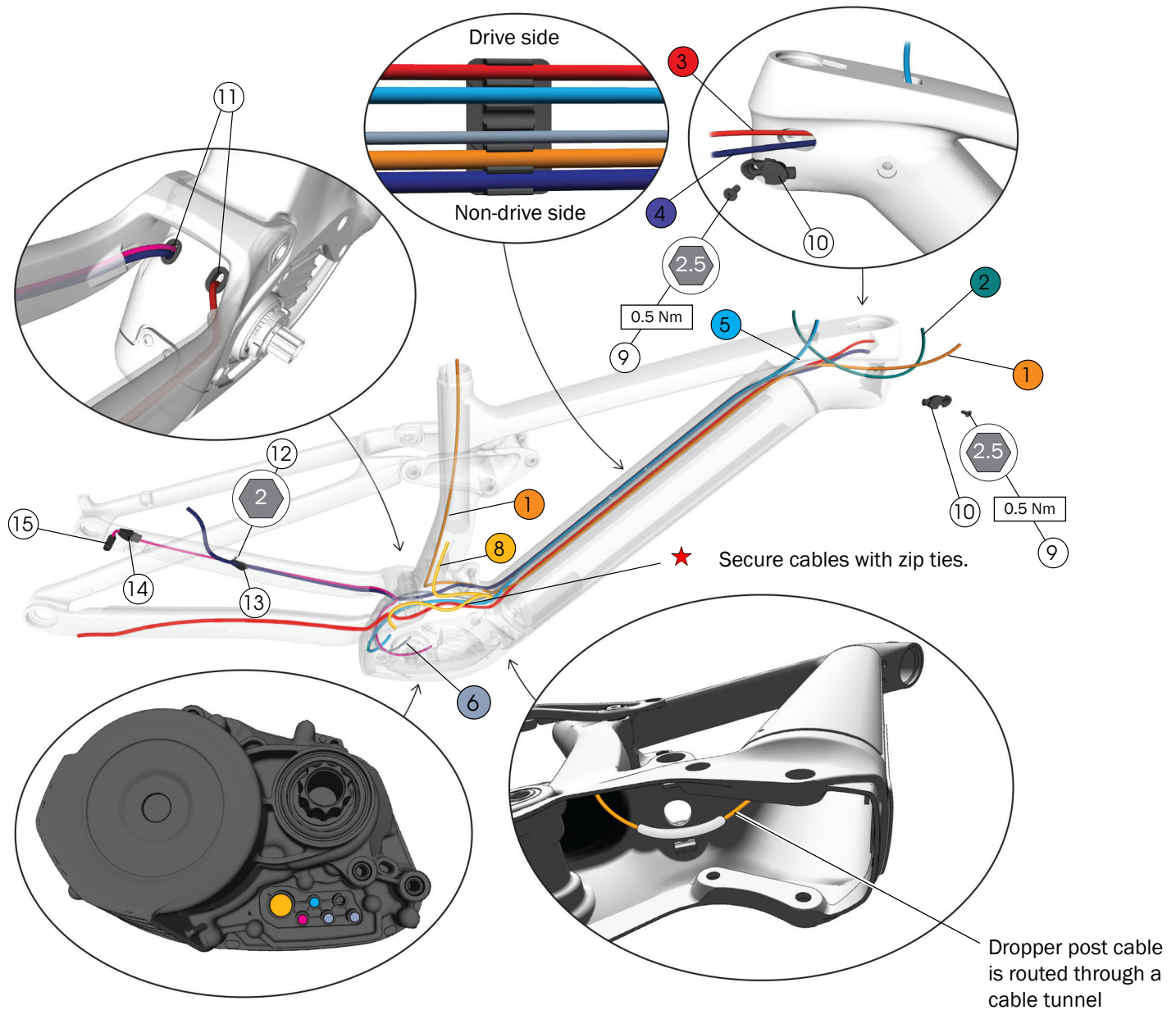


## Tools

- Bearing press, 10x19 drift
- 5mm and 6mm hex wrenches
- Torque wrench with 5mm and 6mm hex bits

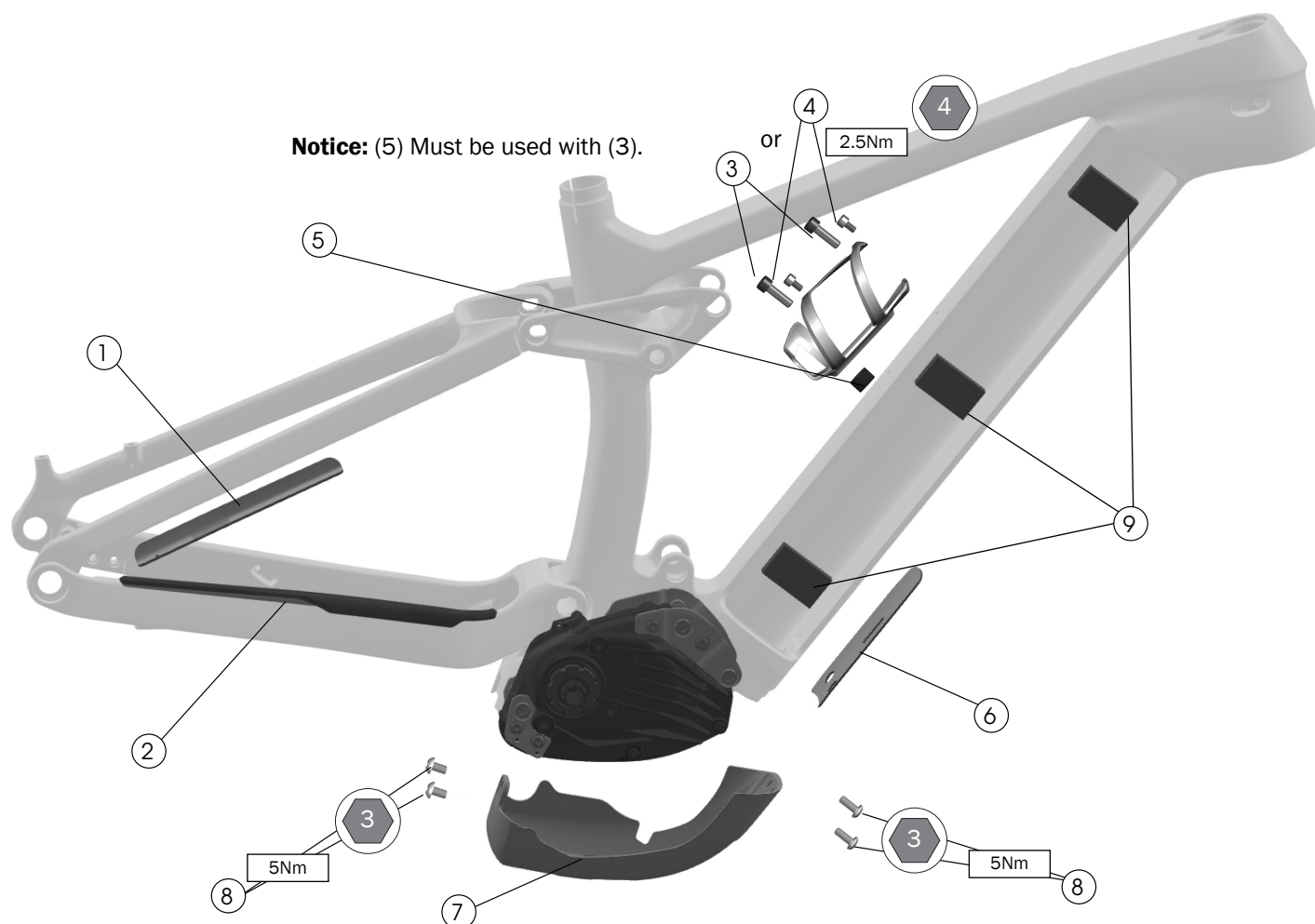
- ① Standard upper shock mount bolt and end cap – [5258209](#)
- ② Bearings – [W293466](#)
- ③ Spacers – [W529969](#)
- ④ Standard lower shock mount bolts – [5258210](#)
- ⑤ Thru shaft shock mount bolts – [W600630](#)

# Cable Routing



- |                                    |  |
|------------------------------------|--|
| 1 Dropper post                     | 9 Flat head screws – <a href="#">W532763</a>             |
| 2 Display to remote                | 10 Cable guides – <a href="#">W519232</a>                |
| 3 Derailleur                       | 11 Cable exit grommets – <a href="#">W5255861</a>        |
| 4 Rear brake                       | 12 Countersink screw – <a href="#">W524884</a>           |
| 5 Display to drive unit            | 13 Grommet – <a href="#">W543605</a>                     |
| 6 Front light (aftermarket option) | 14 Speed sensor chainstay plug – <a href="#">W587873</a> |
| 7 Speed sensor                     | 15 Speed sensor – <a href="#">5284750</a>                |
| 8 Battery power                    | ★ Zip tie  |

# Frame guards



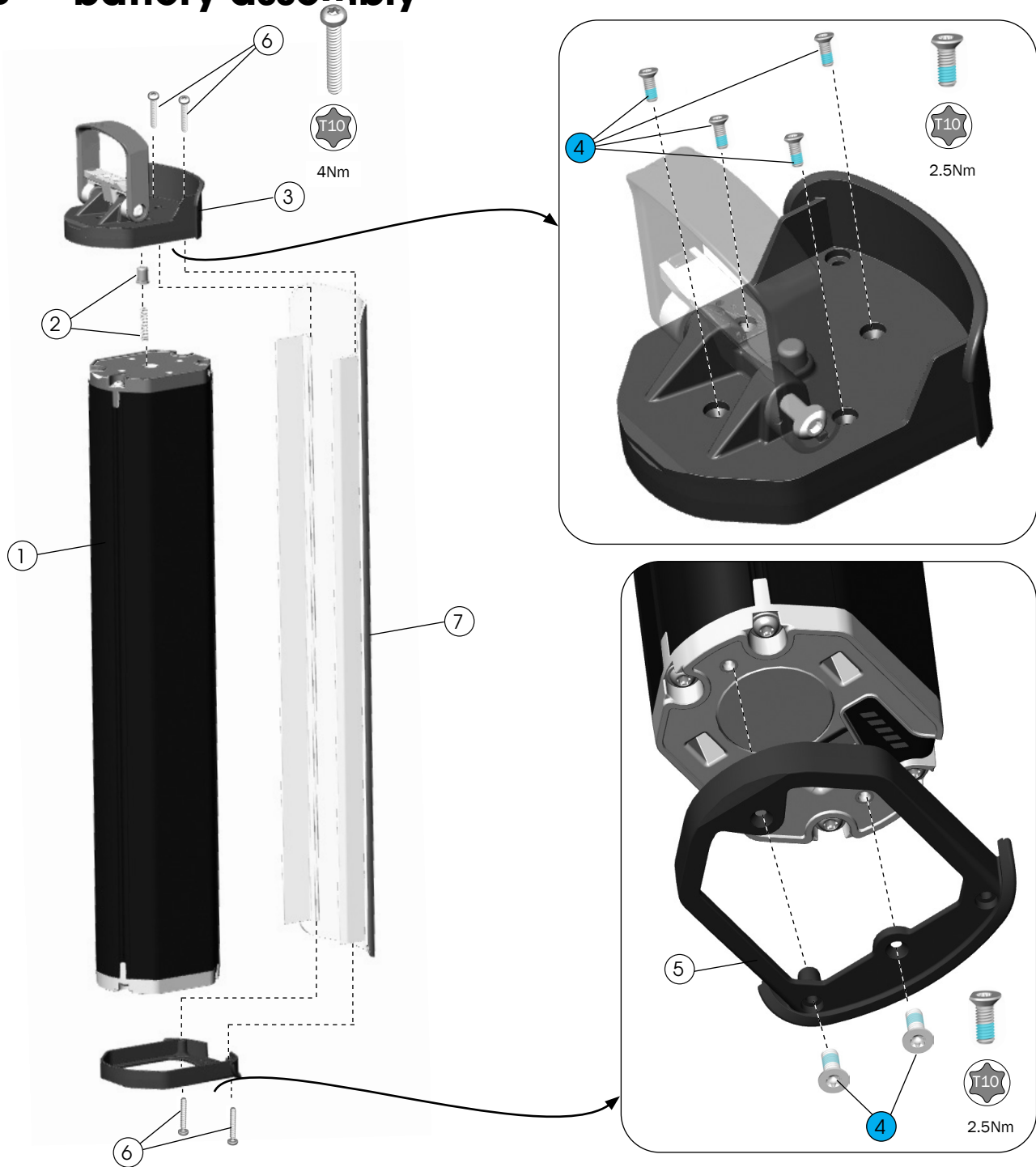
- ① Seatstay guard - [W5255862](#)
- ② Chainstay guard - [W587594](#)
- ③ Screws (S and M frames only) - [W596821](#)
- ④ Bolts (L and XL frames only) - [W549307](#)
- ⑤ Cage spacer (S and M frames only) - [W5256157](#)
- ⑥ Down tube guard - [W590604](#)
- ⑦ Drive unit guard - [W5253938](#)
- ⑧ Screws - [W549305](#)
- ⑨ Foam pads - [W5303275](#)

## Adhesive guards and pads ① ② ⑥ ⑨

Use isopropyl alcohol to clean the frame surface where the chainstay (2) and seatstay guards (1) attach. Wait for the alcohol to dry before applying the guards.

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

# RIB — battery assembly



① Battery, vertical, Smart System,  
S frame, 625Wh — EB12.100.012\*  
M - XL frame - 750Wh — [5288731](#)

② Push pin and spring — [5312675](#)

③ Battery handle assembly — [W5252236](#)

④ Bolts, M3x8 — [W5269016](#)

⑤ Docking bracket — [W5252240](#)

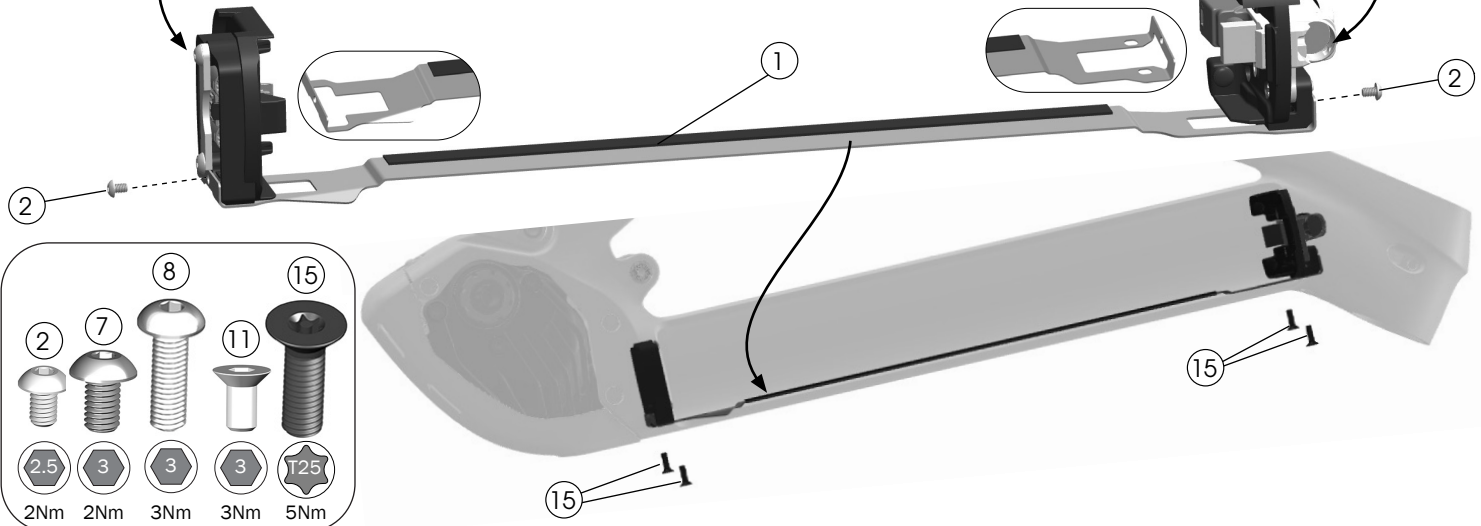
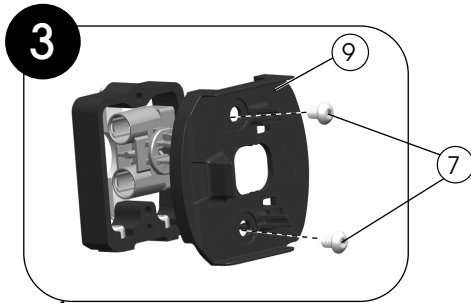
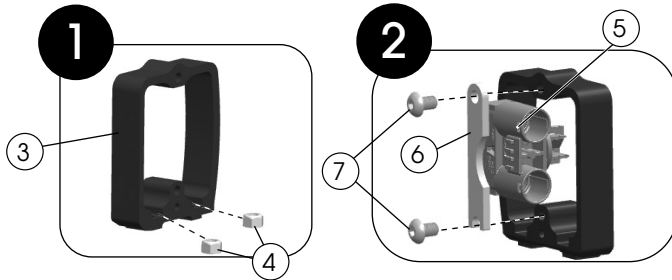
⑥ Bolts, M3x20 — [W5254060](#)

⑦ Cover, 625Wh battery — [37359](#)  
Cover, 750Wh battery — [37360](#)  
Search [trekbikes.com](https://trekbikes.com) to find the color-matched part  
for your bike.

\*Bosch part number. Not available on [trekbikes.com](https://trekbikes.com).

# RIB — docking assembly

## Lower assembly



① Alignment plate — [W5252805](#)

② Screws

④ Locknuts

⑧ Screws

⑪ Countersunk bolts

⑮ T25 security screws

⑬ Washers

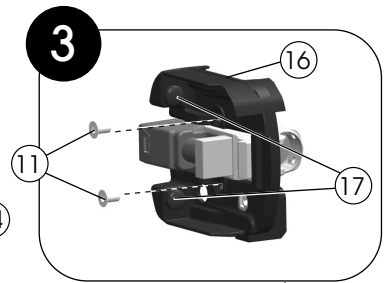
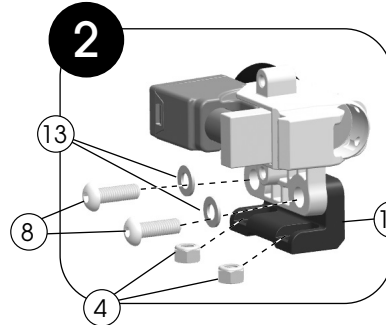
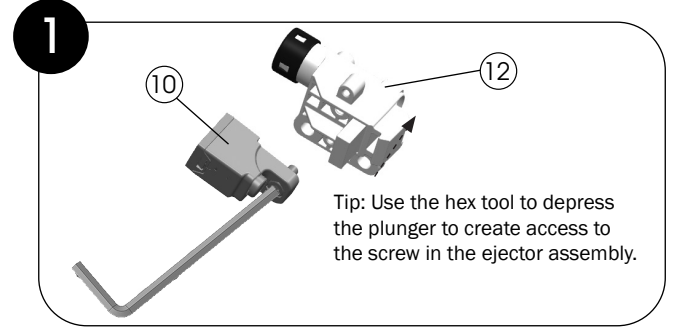
③ Lower docking bracket

⑭ Upper docking bracket

— [5257257](#)

— [5277571](#)

## Upper assembly



⑤ Battery connection plug — EB12.100.015\*

⑥ Power connection retention bracket

⑦ Screws — [W549307](#)

⑨ Lower battery mounting plug — [W5252293](#)

⑮ Upper lock cover — [W5252292](#)

⑮ Bumpers — [579326](#)

⑮ Ejector assembly — [579324](#)

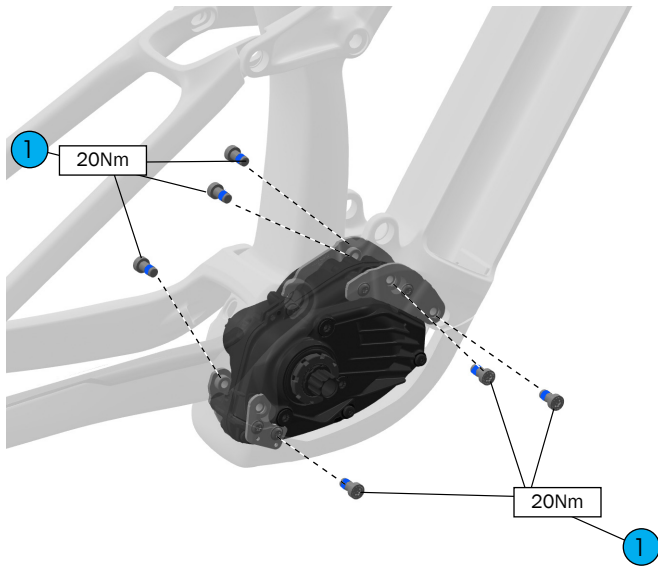
⑮ Lock assembly — [W562311](#)

— [5312122](#)

\*Bosch part number. Not available on [trekbikes.com](#).

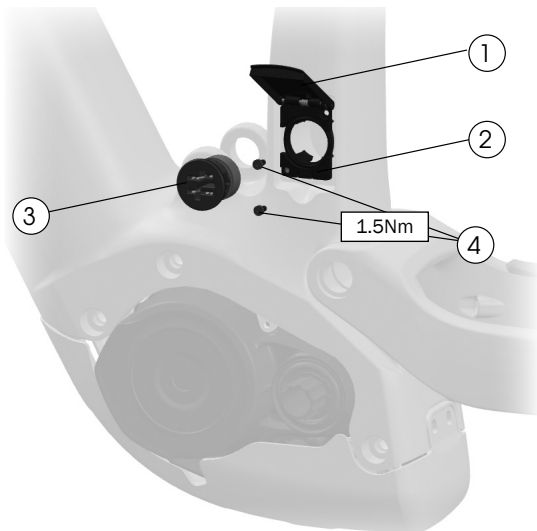
# Drive system components

## Drive unit and mounting bolts



- ① Mounting bolts, TP40 — [5265419](#)

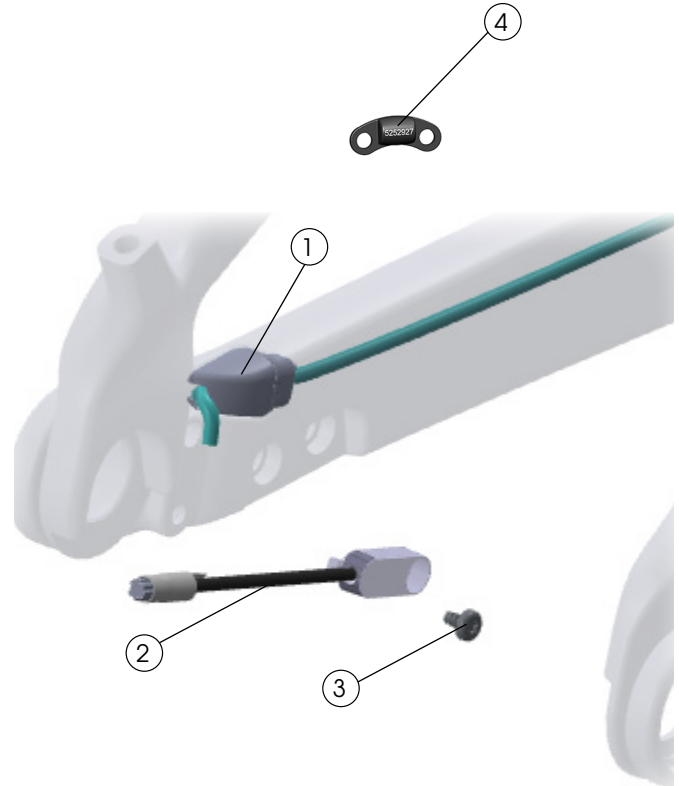
## Battery charge port



- ① Charge port cover — [44374](#)  
Search [trekbikes.com](#) to find the color-matched part for your bike.
- ② Base — [W5251862](#)
- ③ Charge socket — EB12.120.04A\*
- ④ Bolts — [W5276241](#)

\*Bosch part number. Not available on [trekbikes.com](#).

## Speed sensor

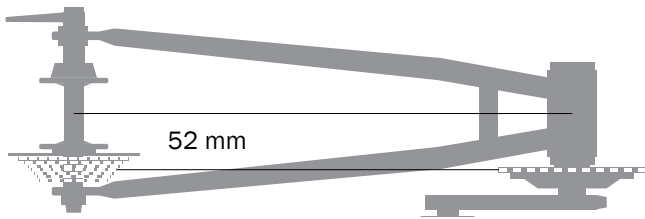


- ① Speed sensor chainstay plug — [W587873](#)
- ② Speed sensor — [5284750](#)
- ③ Bolt — [W562831](#)
- ④ Rotor mount speed sensor magnet — [W5252927](#)



# Specifications

## Chainline (1x only)

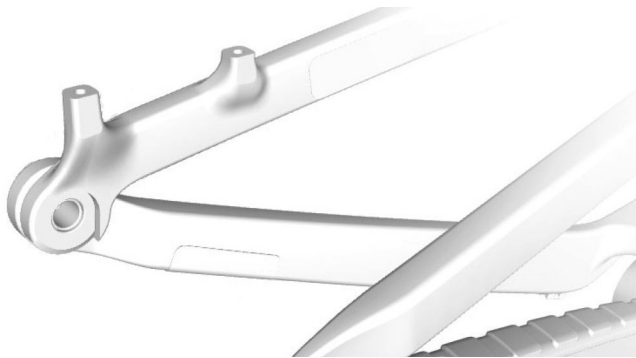


- Boost hub with offset chainring.

## Chainring (1x only)

- 34T only

## Rear brake mount



Minimum	Maximum
180mm, direct mount	Adaptable to 203 mm

## Maximum tyre size

**Notice:** Measurements of actual tyres may vary. Always verify 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.

Wheel set	Maximum tyre size
29"	29" x 2.6"
27.5" rear with the mino link in the high position	27.5" x 2.8"

## Water bottle fit on small frames

**Rail 9.8:** Use Bontrager Voda 15 bottle

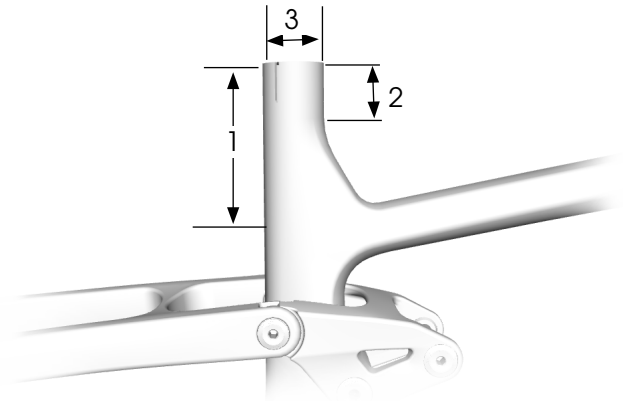
**9.9 with AirWiz:** There is not enough clearance to fit a water bottle.

## Seat post



### WARNING

Always follow the seat post manufacturer's minimum insertion recommendation. Failure to follow the recommendation could cause damage to the seatpost and result in injury to the rider.

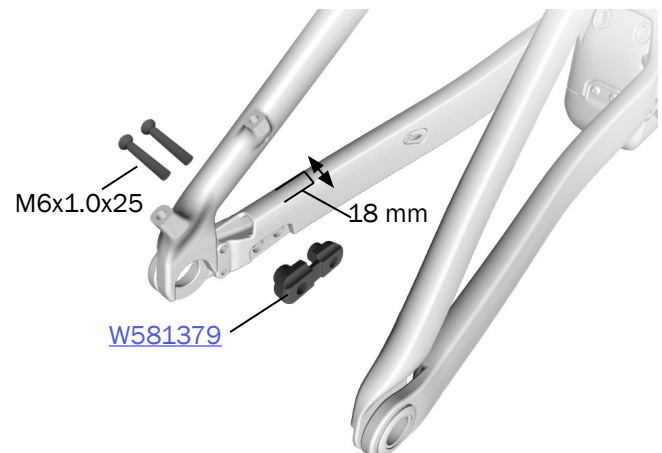


Item	Measurement	Frame
1	Maximum insertion	S
		M
		L
		XL
2	Minimum insertion	75 mm*
3	Seat tube inside diameter	34.9 mm
	Seat tube post clamp outer diameter	39.5 mm

\*Follow the seatpost manufacturer's guidelines.

## Kickstand mount


- Requires kickstand mounting bracket W581379 and two M6x1.0x25 mm bolts



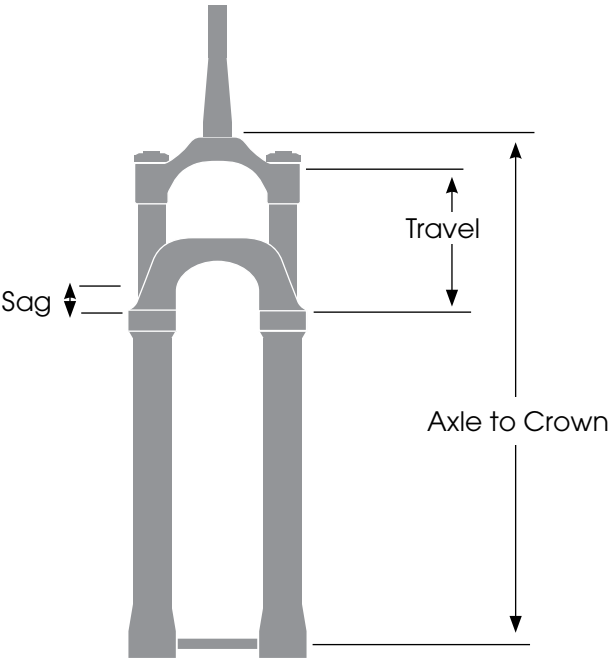
# Suspension

The first step in suspension setup is to determine the sag. All other settings should be adjusted after determining the 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). For recommended rebound settings refer to the suspension calculator at [Trek bikes.com/suspension-calculator](https://trekbikes.com/suspension-calculator).

## Fork

**WARNING**

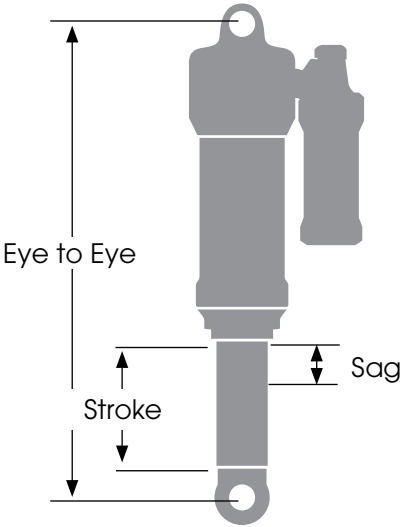
Exceeding the recommended maximum fork length could damage the bicycle and result in injury to the rider.



Frame/ Wheel Size	Axle to Crown (mm)		Travel (mm)	Sag (mm)
S, M, ML, L, XL, XXL	Recommended	571–576	160	24
	Maximum	586	170	25.5

## Shock

Mount	Width
Bottom mount	54 mm
Top mount	40 mm



Description	Dimension
Eye-to-eye length	230 mm
Stroke length	57.5 mm
Recommended sag	30%, 17.25 mm