

**TREK**



**2023 FX+ / DUAL SPORT+**  
SERVICE MANUAL SUPPLEMENT



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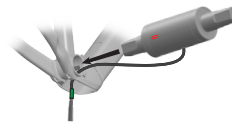
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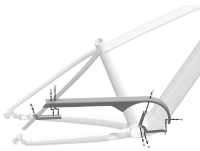
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	FX+ / Dual Sport+	
Rear hub outer limit dimension (OLD)	144.5mm	
Front hub outer limit dimension (OLD)	100mm	
Fork steerer tube outer dimension (OD)	28.6mm	
Bottom bracket type/width	T47	
Brake rotor diameter min/max	160mm	
Chainline	49mm	
Chainring max	46t	
Tire width max 700c (without fenders)	Front	50mm
	Rear	50mm
Tire width max 700c (with fenders)	Front	40mm
	Rear	40mm

[Specifications](#)



FX+



Dual Sport+

## 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 appropriate grease



Apply threadlocker



Torque

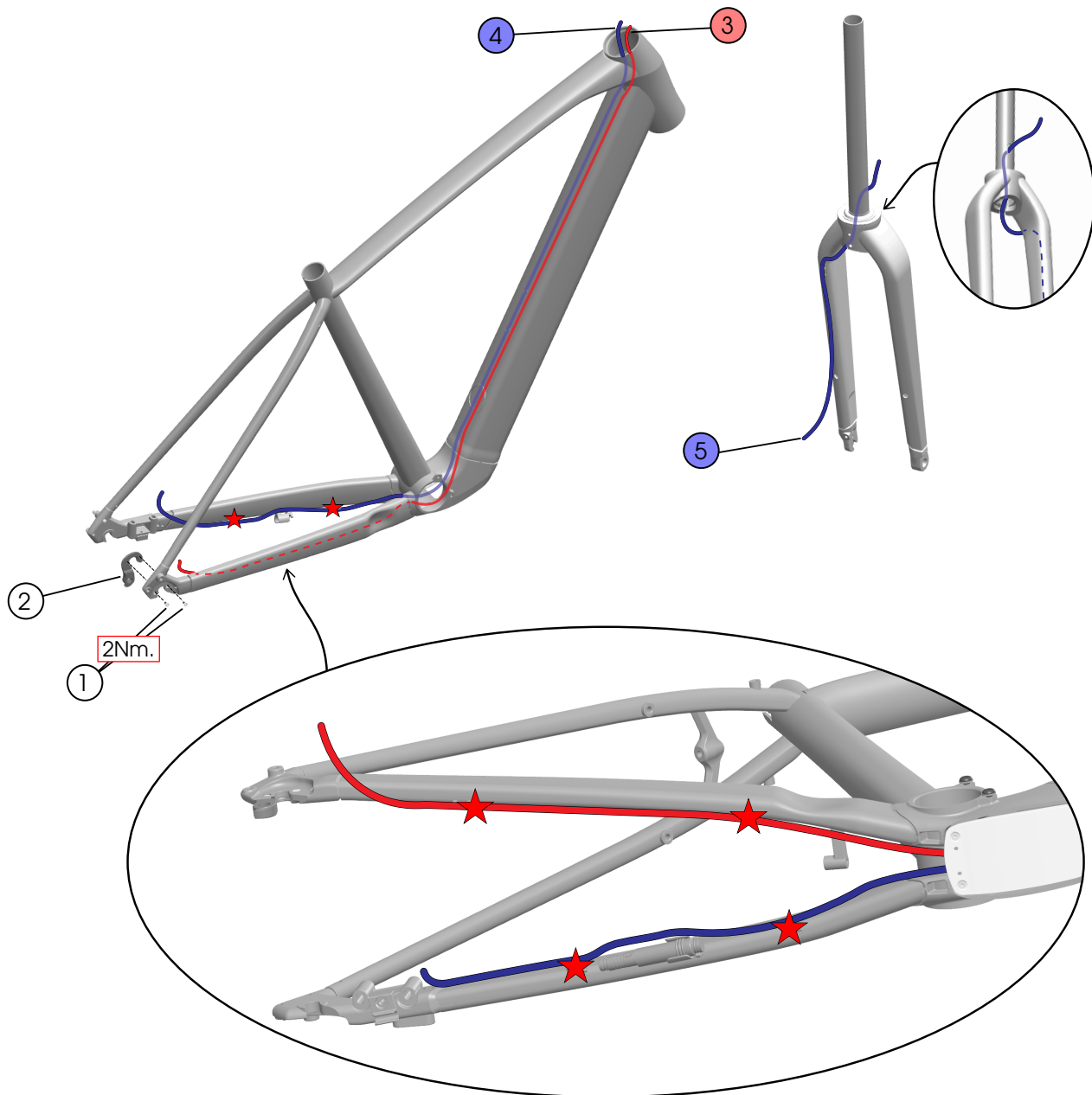


Cable (zip) tie

## More e-bike information

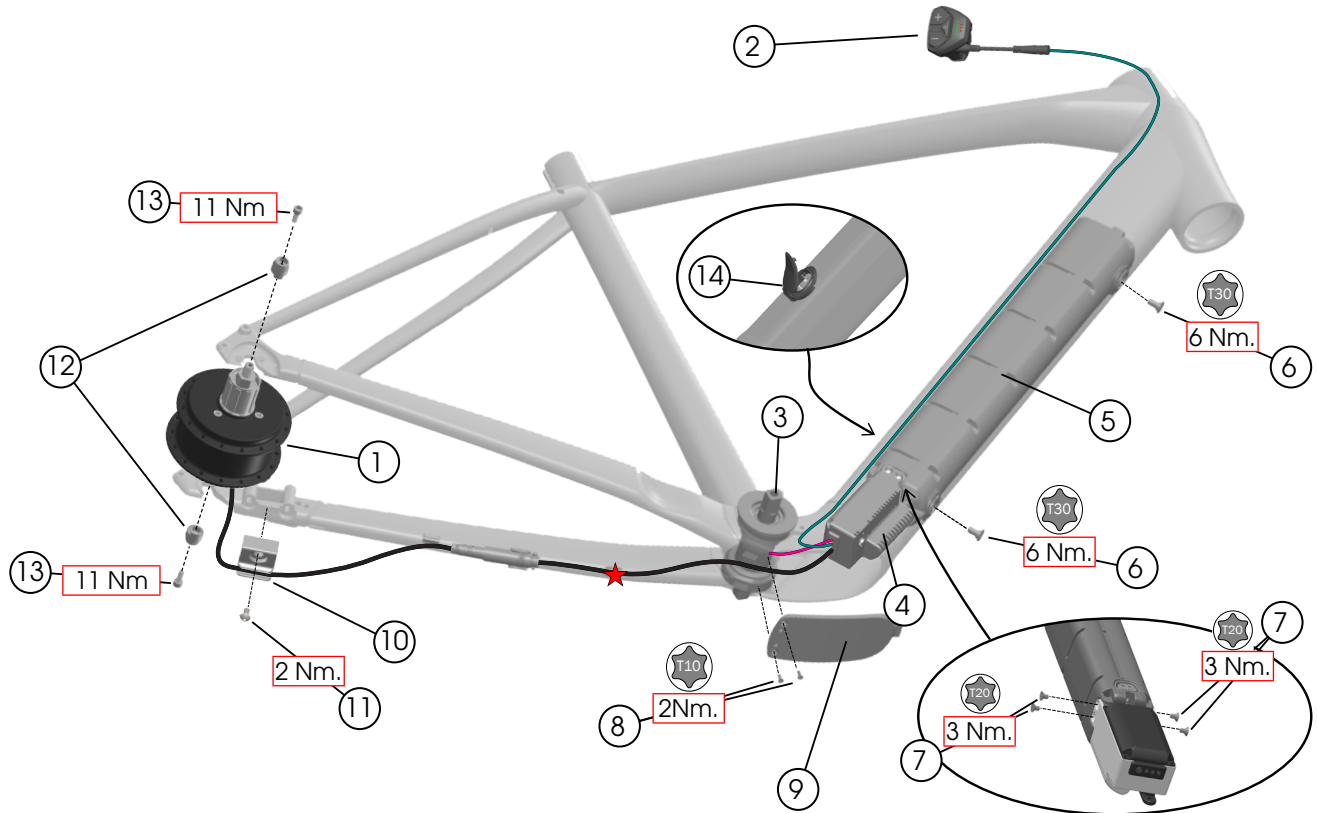
For additional information about the e-bike system, go to the *Electric bikes* section at [trekbikes.com/manuals](https://trekbikes.com/manuals).

# Brake/shift routing



- ① Derailleur hanger bolts (M3x7 mm) – W318604
- ② Derailleur hanger – W5268484
- ③ Rear derailleur cable
- ④ Rear brake hose
- ⑤ Front brake hose

# E-system components and routing



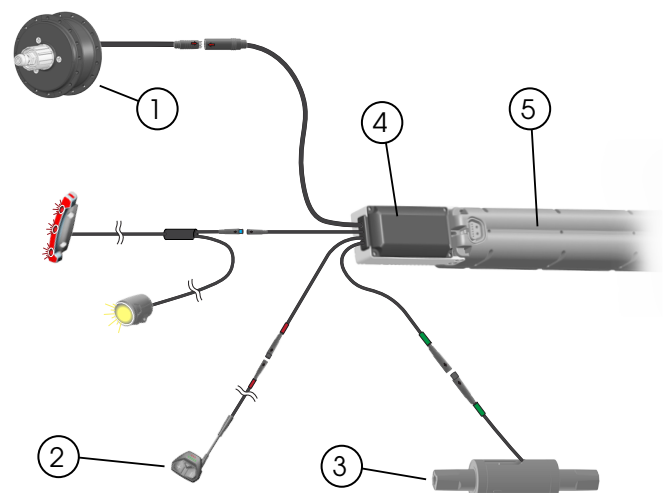
- ① Hub motor - W5266204
- ② Remote - W5260746
- ③ Torque sensor - W5257770
- ④ Controller - W5252986
- ⑤ Battery - W5255878
- ⑥ T30 drive bolts (M6x8 mm) - W5258222
- ⑦ T10 drive bolts (M4x6mm) - 5269023
- ⑧ T10 drive bolts (M3x8 mm) } 5284384
- ⑨ Bottom bracket cover } 5284384
- ⑩ Cable guide } 5284388
- ⑪ Cable guide bolt (M4x6 mm) } 5284388
- ⑫ Anti-rotational flange nut } 5288641
- ⑬ Axle bolt } 5288641
- ⑭ Charge port cover - W5263927

## Before removing the rear wheel

1. Shift to the smallest rear cog (highest gear).
2. Unplug the motor cable at the chainstay.
3. Remove the cable-guide bolt (11).
4. Remove both axle bolts (13) and flange nuts (12).

## Wiring diagram

**NOTE:** Light wiring diagrams are on pages 10-11.

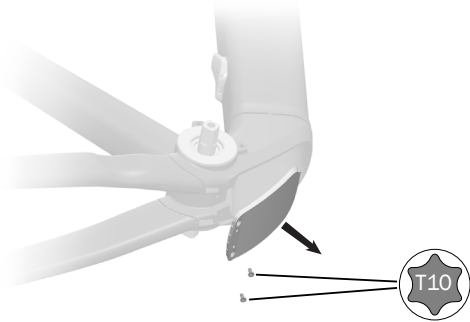


# Battery and controller assembly

**AUTHORISED DEALERS ONLY:** Only authorised dealers should perform service on the e-system. Improper handling, tools used or torque applied to these parts may result in damage to the e-system components and cables.

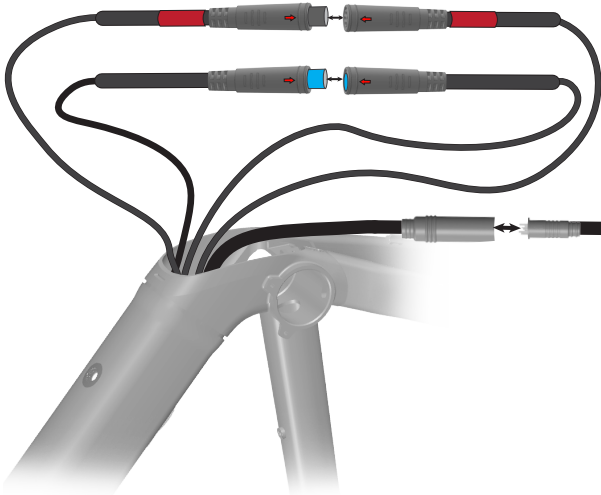
## Remove the battery

1. Remove the bottom bracket cover (9).

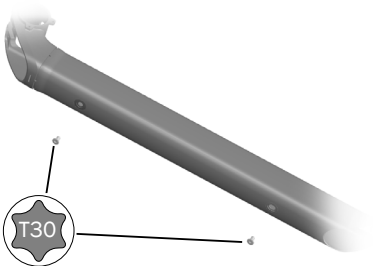


2. Cut the zip tie holding the motor cable to the frame.
3. Unplug all cables in the bottom bracket shell.

**NOTICE:** Do not pull the cables apart by the wires – this can damage them.

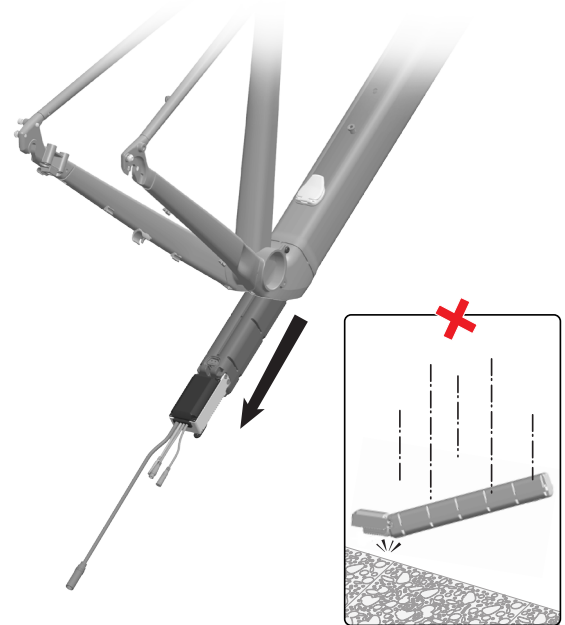


4. Remove the two bolts (6) under the down tube.

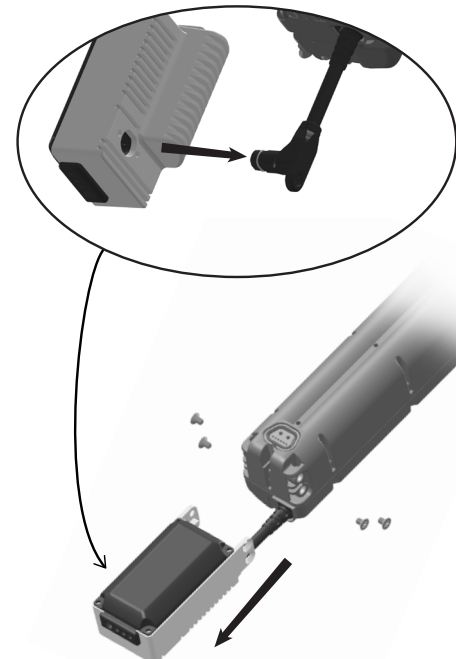


5. Rotate the bicycle and slide the battery assembly out (this uses gravity).

**NOTICE:** Don't drop it! The battery can slide out easily and fall to the floor, causing damage.



6. Unplug the battery from the controller and remove the bolts (7) connecting the controller to the battery.

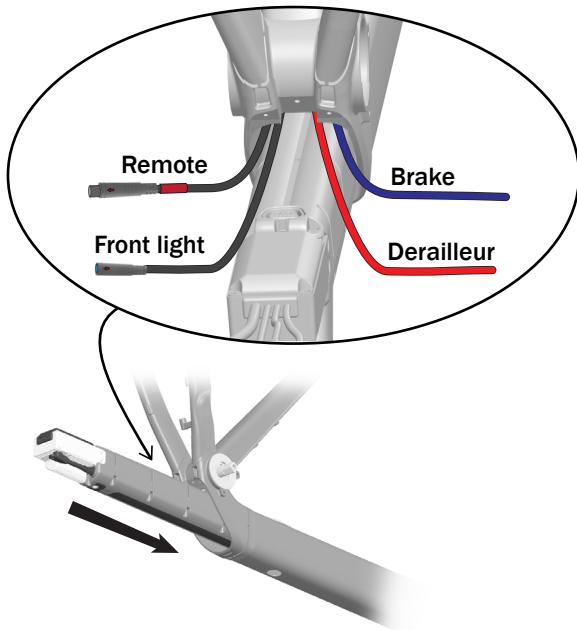


# Battery and controller assembly (continued)

## Install the battery

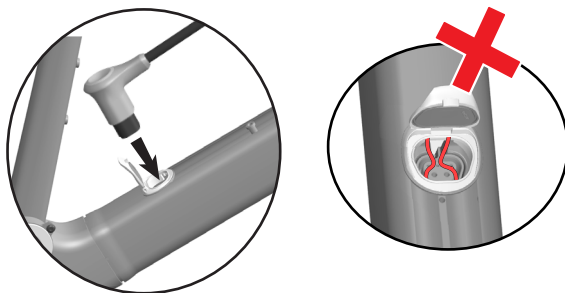
1. Use the four bolts (7) to attach the controller to the battery. Torque the bolts to 3 Nm.
2. Slide the battery assembly into the down tube – positioning the cables on the top of the battery as shown below. Readjust the cables, if necessary.

**NOTICE:** Do not force it – the battery should slide in without applying extra pressure.

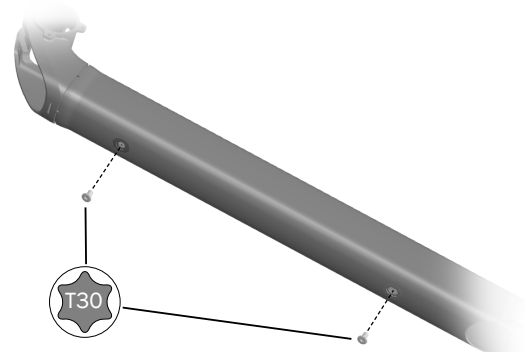


3. Ensure that there are no cables between the charge port opening and the battery.

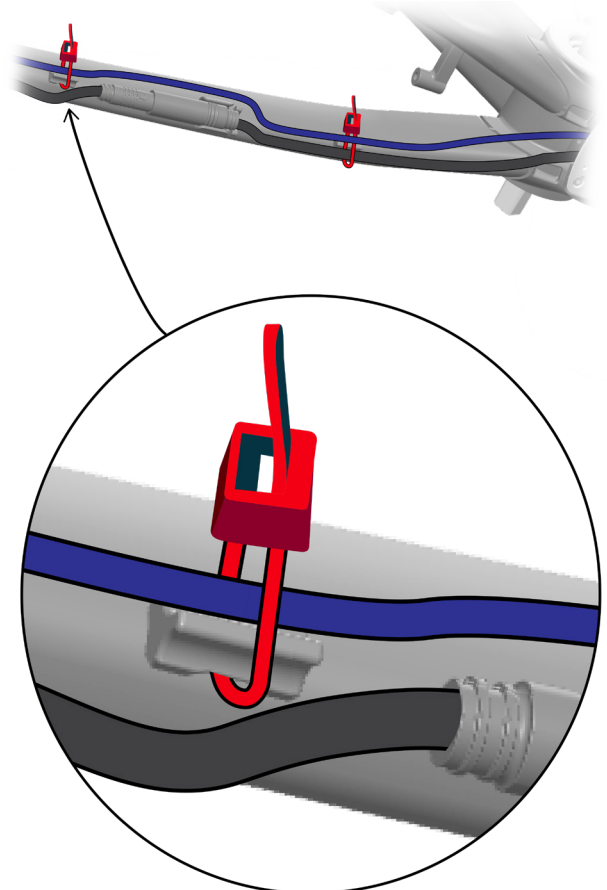
**TIP:** Insert an unplugged charger to help align the charge port.



4. Install and tighten the bolts (6) to 6 Nm.



5. Connect all cables.
6. Zip tie the rear brake hose to the chainstay in two places. Zip tie the motor cable to the chainstay in the forward position only.



7. Fit all cables into the bottom bracket shell and install the cover (9).

**NOTICE:** Do not pinch the cables.

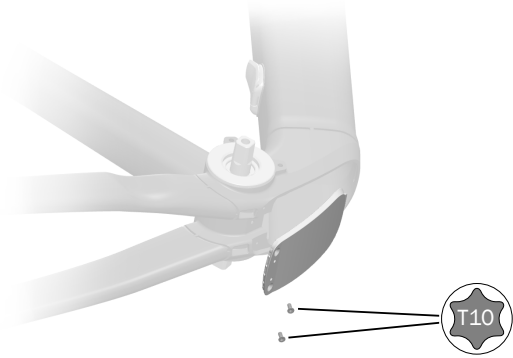
## Bottom bracket/torque sensor

**AUTHORISED DEALERS ONLY:** Only authorised dealers should perform service on the e-system. Improper handling, tools used or torque applied to these parts may result in damage to the e-system components and cables.

### Remove the bottom bracket

Remove the chain guard, cranks and pedals before following these instructions.

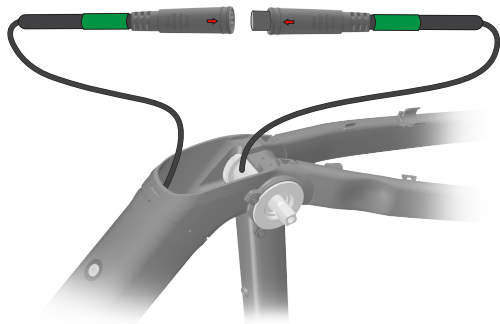
1. Remove the bottom bracket cover (9).



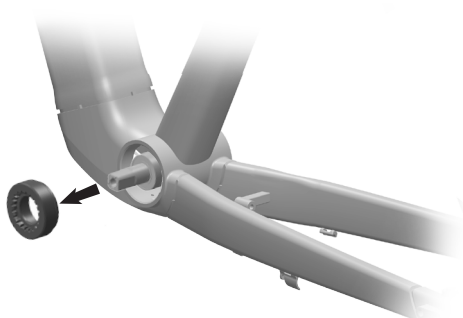
2. Disconnect the torque sensor cable.

**NOTICE:** Do not pull the cables apart by the wires – this can damage them.

**NOTICE:** If you do not disconnect the plug, you will damage the torque-sensor cable when you try removing the bottom bracket cup.



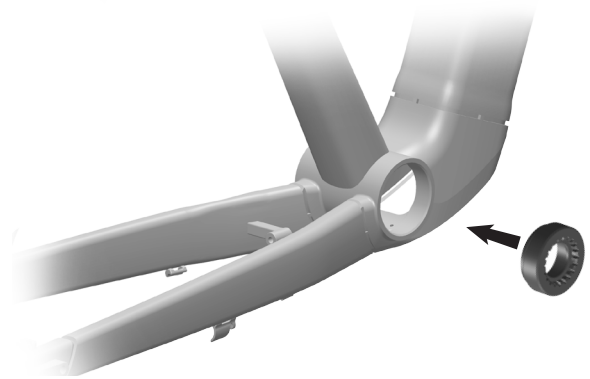
3. Remove the non-driveside cup.



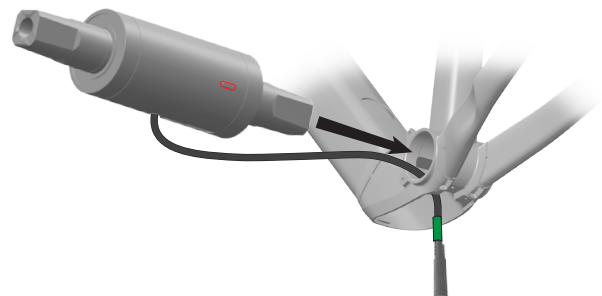
4. Pull out the torque sensor/bottom bracket.
5. Remove the driveside bottom bracket cup, if necessary.

### Install the bottom bracket

1. Install the driveside cup. Torque to 35 Nm.



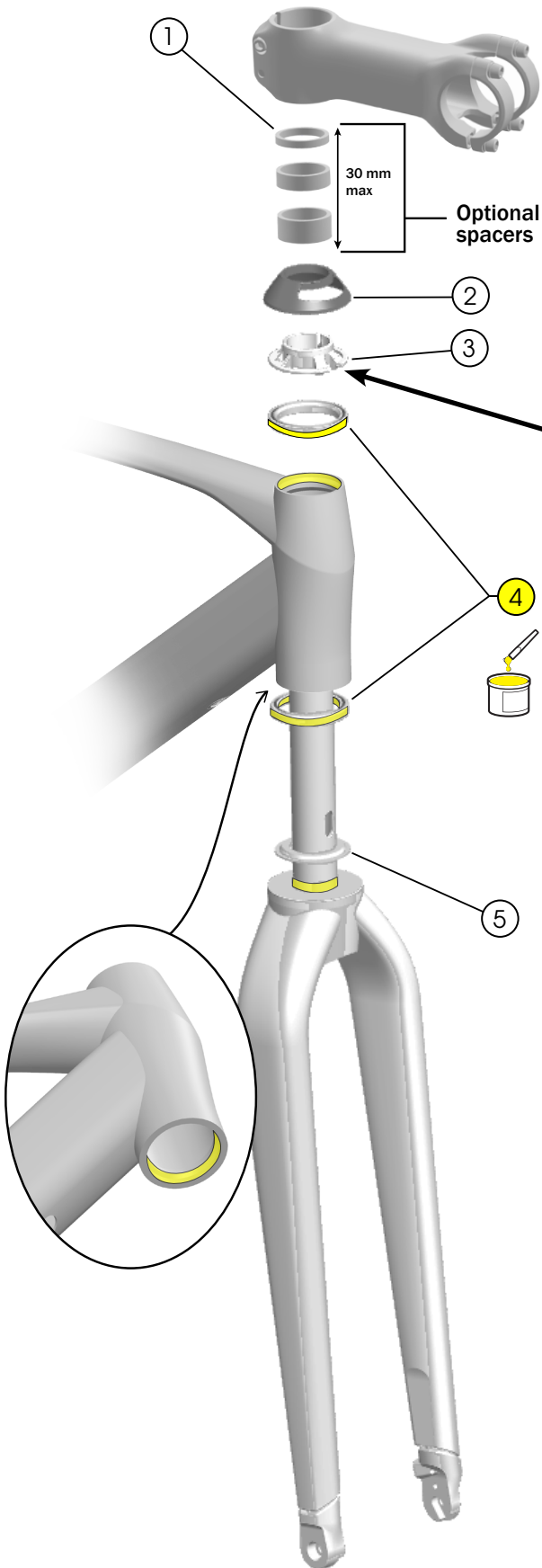
2. Insert the torque sensor and cable – notched side first – into the non-driveside.



3. Install the non-driveside cup. Torque to 35Nm.
4. Reconnect the bottom bracket/torque sensor cable.
5. Fit all cables into the bottom bracket shell and install the cover (9).

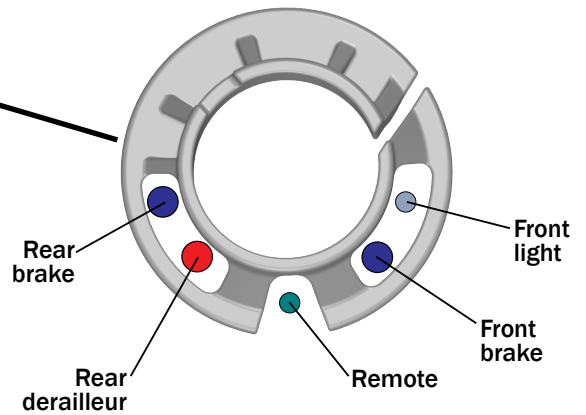
**NOTICE:** Do not pinch the cables.

# Fork and headset



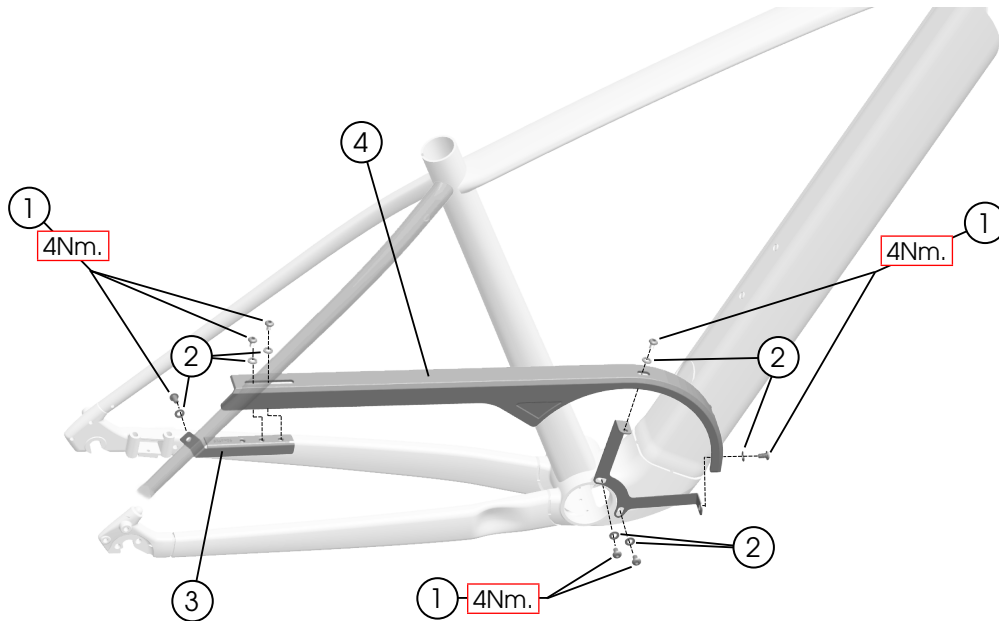
- ① Spacer (5 mm) - 5253930
- ② Headset routing cap - W5260269
- ③ Routing split ring - W5294453
- ④ Headset bearings - W540243
- ⑤ Crown race reducer - 543254

## Split ring routing





## Chain guard (aftermarket on Dual Sport+)



① Bolts (M5x8 mm)

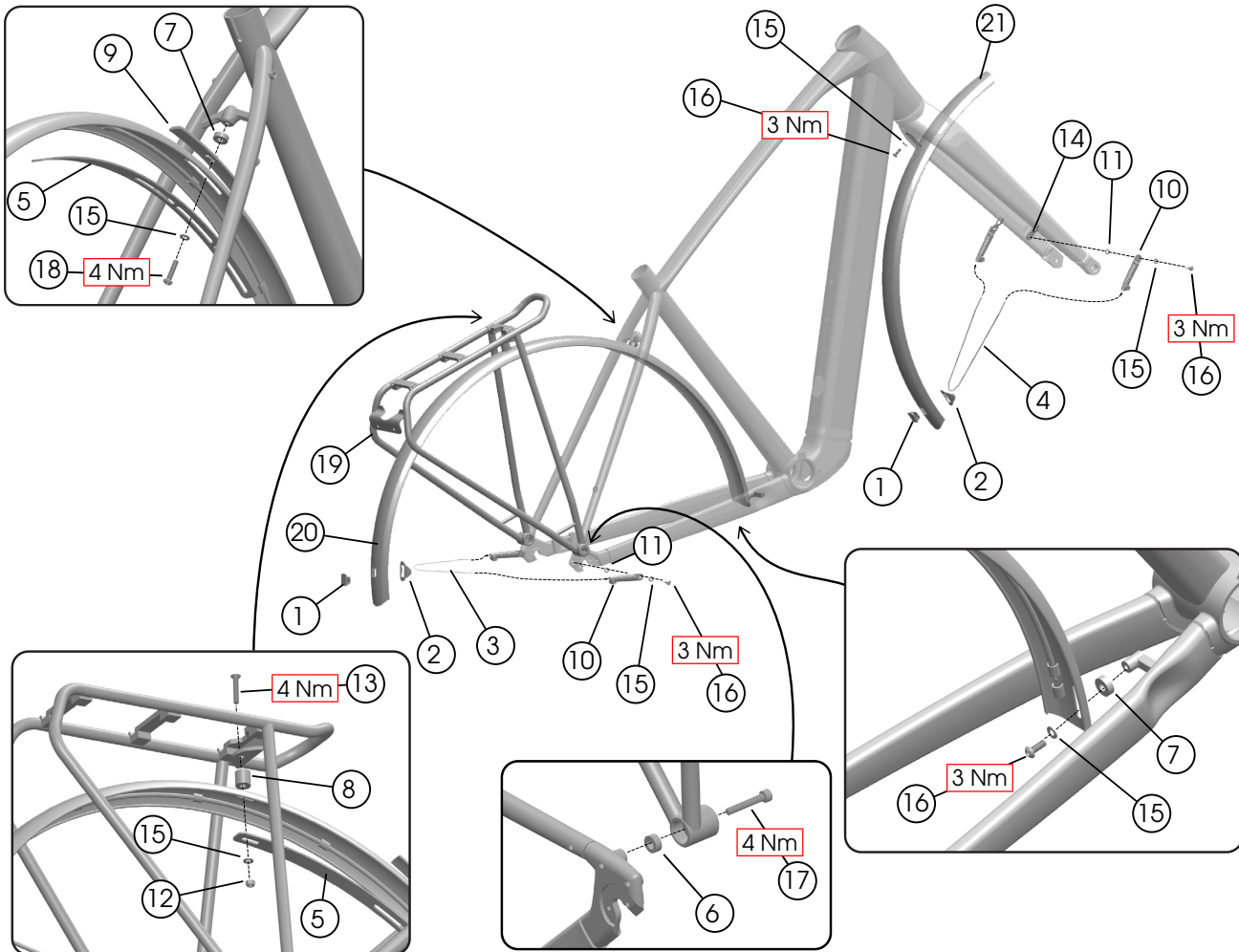
② Washers (M5)

③ Seat stay bracket

④ Chain guard

5284386

## Mudguards and rack (aftermarket on Dual Sport+)



- |                                     |           |                               |           |
|-------------------------------------|-----------|-------------------------------|-----------|
| ① Stay clips                        | } 5258253 | ⑫ Locknut (M5)                | } 5260273 |
| ② Damping rubbers                   |           | ⑬ Bolt (M5x30 mm)             |           |
| ③ Mudguard stay (330 mm) - W1049503 |           | ⑭ Bolt-nuts - W317707         |           |
| ④ Mudguard stay (310 mm) - W5254584 |           | ⑮ Flat washers (M5)           |           |
| ⑤ Mudguard strut - W600320          |           | ⑯ Bolts (M5x14 mm)            | } 5260274 |
| ⑥ Spacers (12x5 mm) - 504881        |           | ⑰ Bolts, M4 hex               |           |
| ⑦ Spacers (15x5 mm)                 | } 5260275 | ⑱ Bolt, M3 hex (M5x25 mm)     |           |
| ⑧ Spacer (15x15 mm)                 |           | ⑲ Rack (70 mm wide) - W597296 |           |
| ⑨ Slot cover - W1049294             |           | ⑳ Rear fender - W5251030      |           |
| ⑩ Mudguard stay mounts - 5258260    |           | ㉑ Front fender - W5251035     |           |
| ⑪ Knurled washers                   |           |                               |           |

## Light routing - FX+

**NOTE:** These lights are designed for 6 volts. If you use a light with a higher voltage, it may not function properly and could take power away from the e-bike motor.



## Light routing - Dual Sport+

**NOTE:** These lights are designed for 6 volts. If you use a light with a higher voltage, it may not function properly and could take power away from the e-bike motor.





# Specifications

		FX+ / Dual Sport+
<b>Rear hub outer limit dimension (OLD)</b>		144.5 mm
<b>Front hub outer limit dimension (OLD)</b>		100 mm
<b>Fork steerer tube outer dimension (OD)</b>		28.6 mm
<b>Bottom bracket type/width</b>		T47
<b>Brake rotor diameter min/max</b>		160 mm
<b>Chainline</b>		49 mm
<b>Chain ring max</b>		18 kg/46t
<b>Tyre width max 700c</b> (without mudguards)	<b>Front</b>	50 mm
	<b>Rear</b>	50 mm
<b>Tyre width max 700c</b> (with mudguards)	<b>Front</b>	40 mm
	<b>Rear</b>	40 mm