

TREK



2023 Powerfly FS

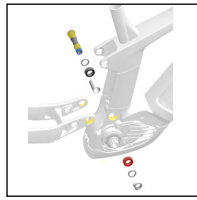
Gen 3 FS 9 EQ, FS 7, FS 4 EQ, and FS 4

SERVICE MANUAL

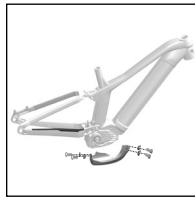
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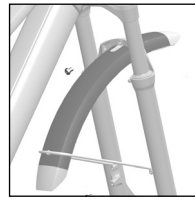
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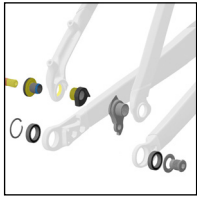
[Front mudguard](#)



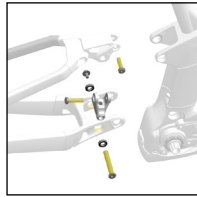
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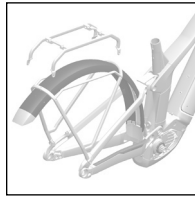
[Speed sensor](#)



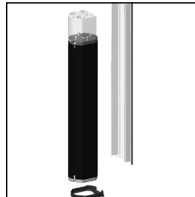
[Active Braking Pivot \(ABP\)](#)



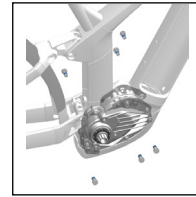
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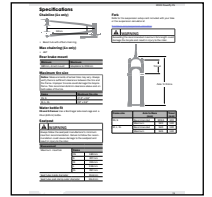
[Full-size rear mudguard and rack](#)



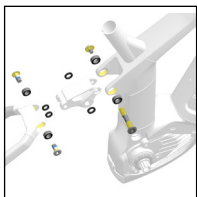
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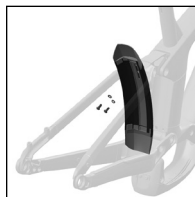
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Safety

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

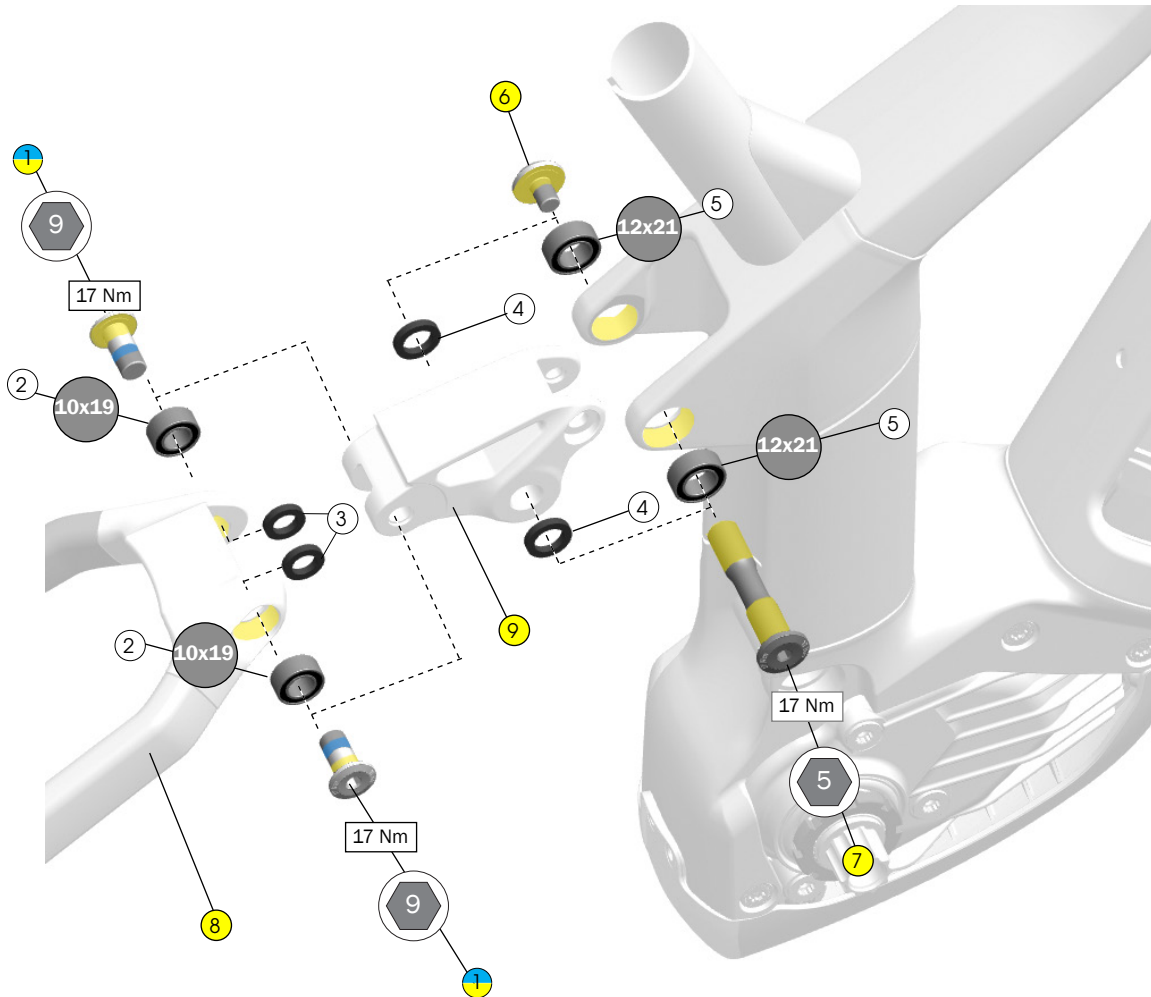
Re-apply threadlocker

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
- Torque
- Hex tool size
- Torx tool
- Drift size
- Zip tie

Rocker pivot and seat stay

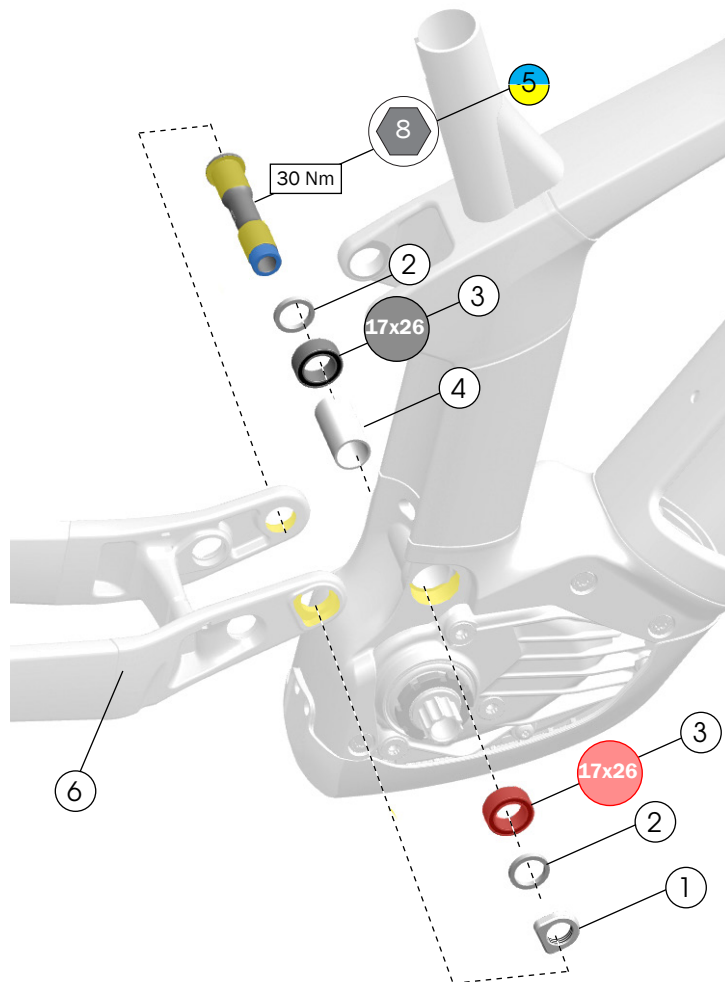


- ① Seat stay bolts, M10 x 21 mm – [W1051358](#)
 - ② Seat stay bearings, 10 x 19 x 8 mm – [W5256339](#)
 - ③ Spacers, 16 x 10 x 3 mm – [W529969](#)
 - ④ Spacers, 18 x 12 x 3 mm – [W574411](#)
 - ⑤ Rocker pivot bearings, 12 x 21 x 8 mm – [W5256341](#)
 - ⑥ Rocker pivot axle nut, M8 x 11 mm
 - ⑦ Rocker pivot axle, M16 x 83 mm
- } – [5256640](#)
- ⑧ Seat stay – [44376](#)
Search trekbikes.com to find the colour-matched part for your bike.
 - ⑨ Rocker link – [33983](#)
Search trekbikes.com to find the colour-matched part for your bike.

Tools

- Bearing press, 10 x 19 and 12 x 21 drifts
- 5 mm and 9 mm hex wrenches
- Torque wrench with 5 mm and 9 mm hex bits

Main pivot and chain stay

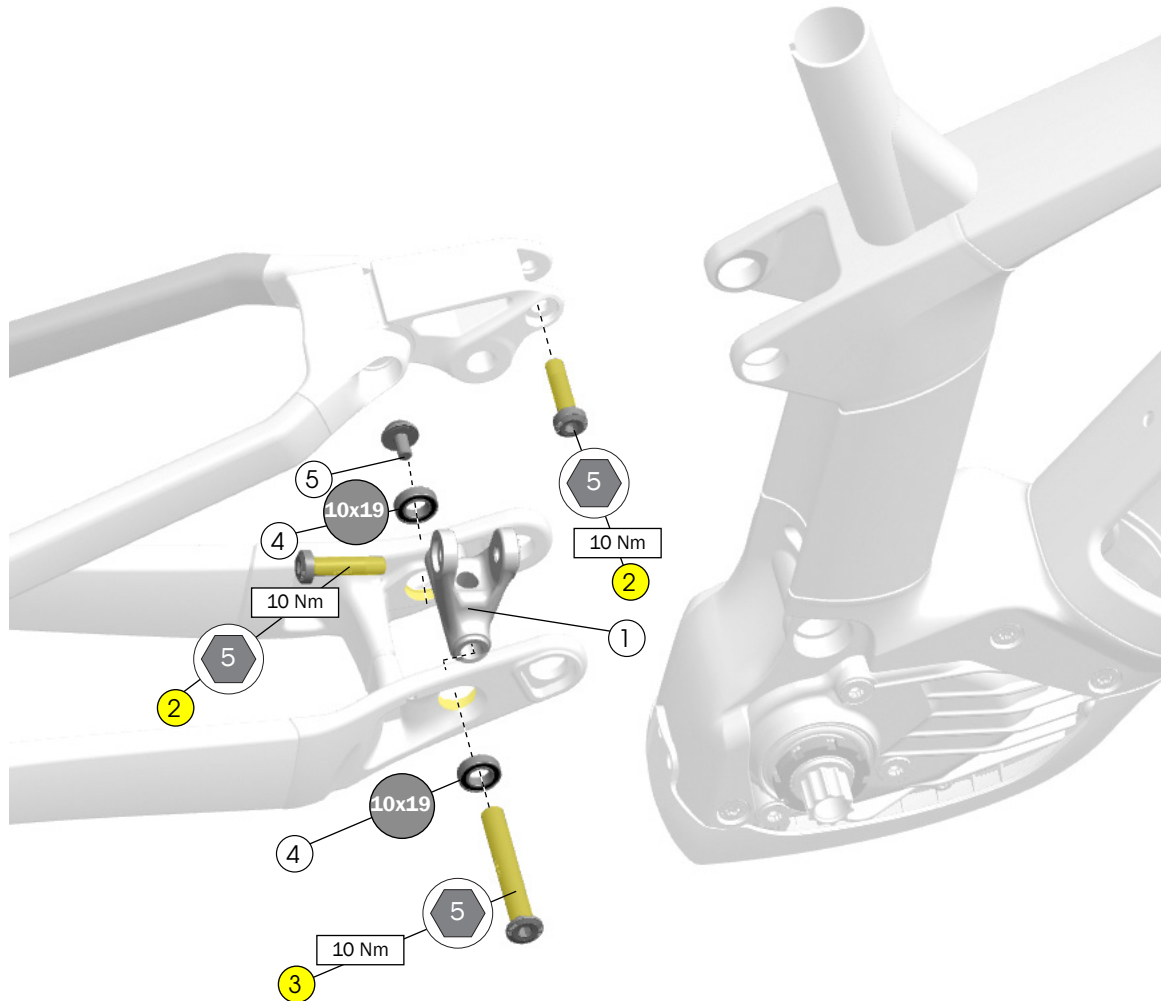


- ① Nut, M16 x 1.5 mm – [W584134](#)
- ② Spacers, 22 x 17 x 3 mm – [W440921](#)
- ③ Bearings, 17 x 26 x 10 mm – [W5256338](#) – [5256639](#)
- ④ Main pivot sleeve – [W500592](#)
- ⑤ Main pivot axle, M8 x 62.5 mm – [W601376](#)
- ⑥ Chainstay – [44377](#)
Search trekbikes.com to find the colour-matched part for your bike.

Tools

- Bearing press, 17 x 26 drift
- 8 mm hex tool
- Torque wrench with 8mm hex bit
- Grease

Shock mounts



Tools

- Bearing press, 10 x 19 drift
- 5mm hex tool
- Torque wrench with 5 mm hex bit
- Grease

- ① Shock linkage – [5256637](#)
- ② Upper shock bolt, M8 x 33 mm – [W600364](#)
- ③ Lower shock axle, M6 x 69 mm – [5256638](#)
- ④ Bearings, 10 x 19 x 5mm – [W5256337](#)
- ⑤ Lower shock bolt, M6 x 11 mm – [5256638](#)

Dimensions



Shock Dimensions

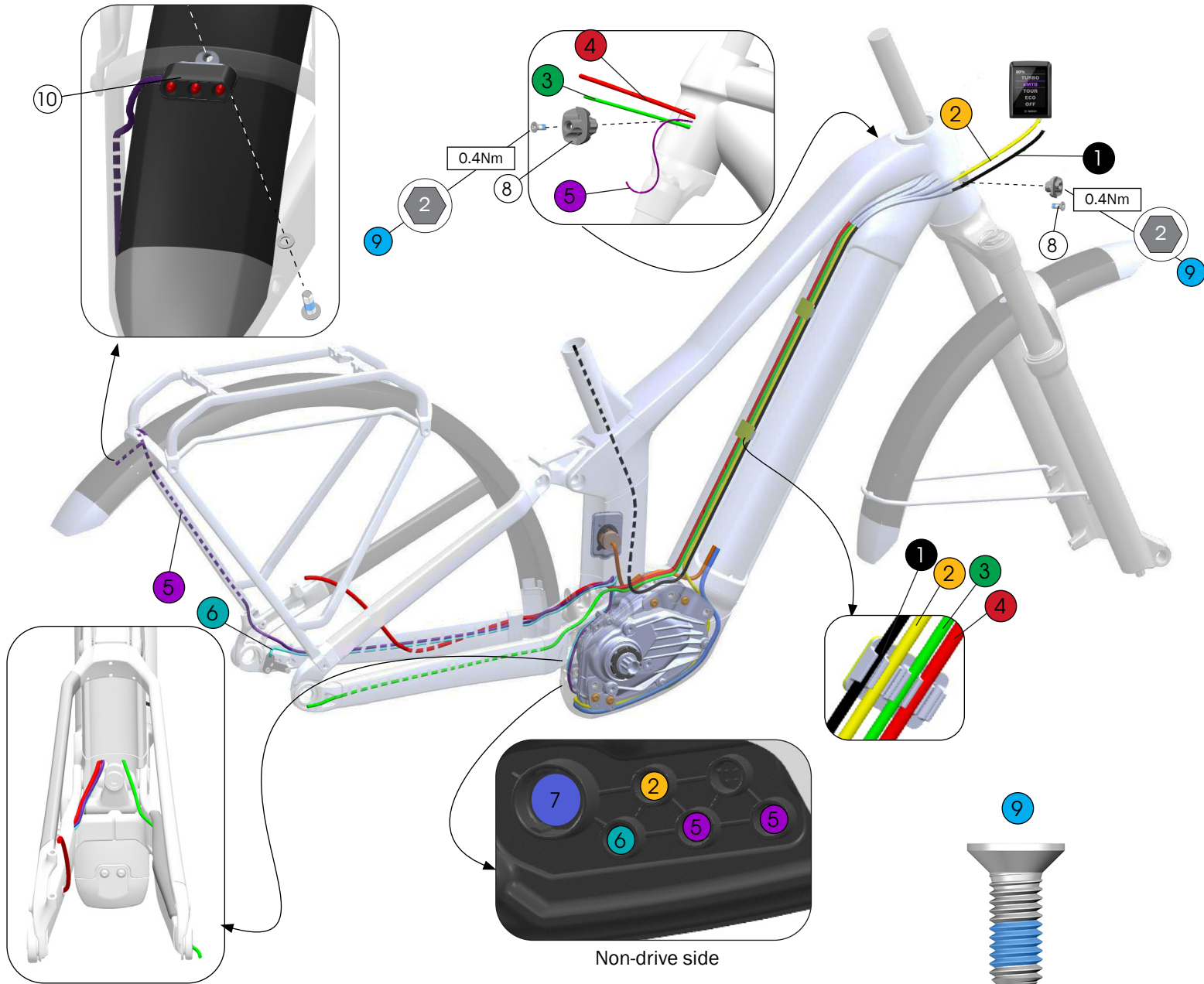
Eye-to-eye length: 190 mm

Stroke length: 45 mm

Upper width: 20 mm

Lower width: 20 mm

Cable routing



1 Dropper post cable

2 Display cable – EB12.120.005*

3 Derailleur housing

4 Rear brake hose

5 Light cables (lights included only on Powerfly Equipped models)

6 Speed sensor cable

7 Battery power cable – EB12.120.04A*

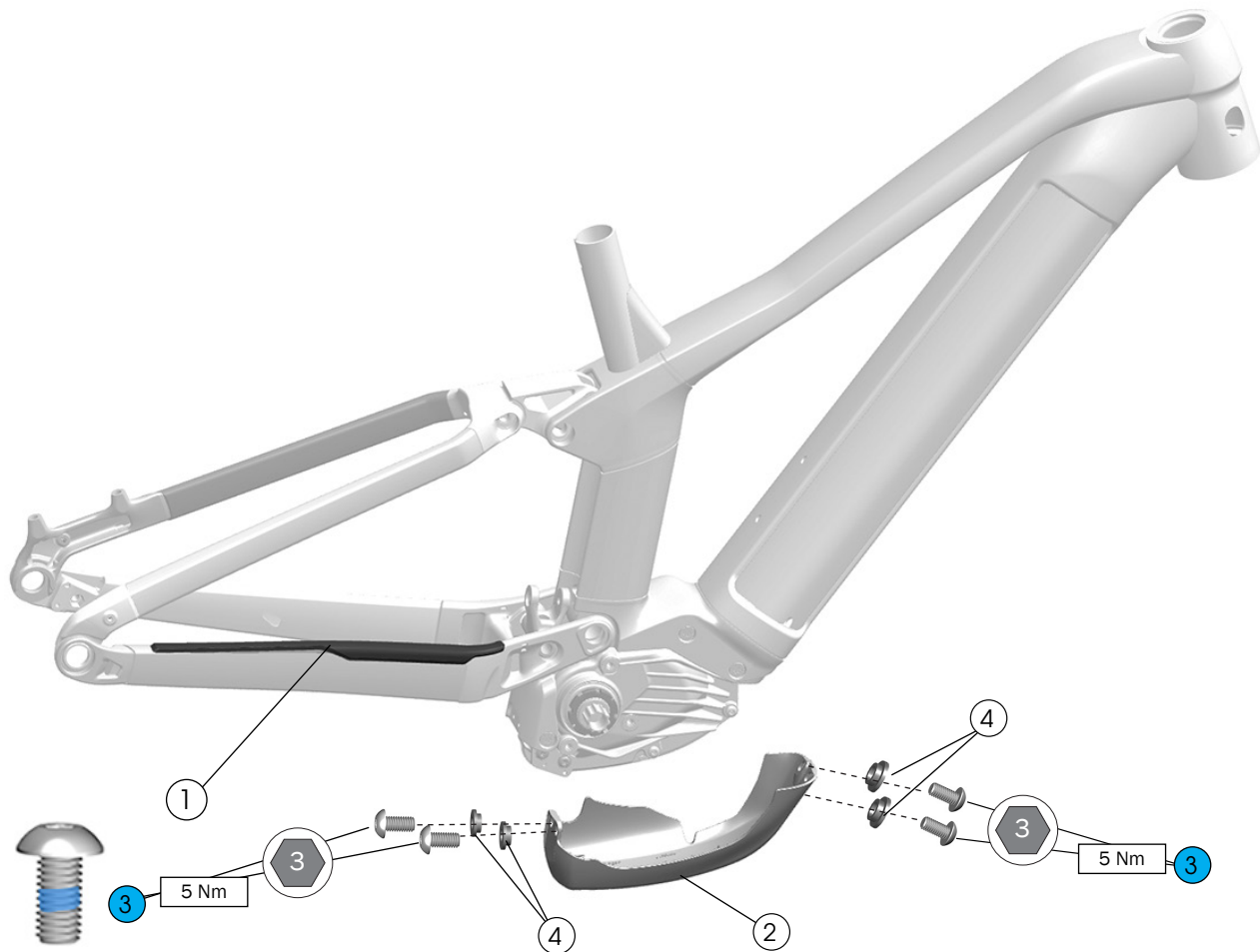
8 Housing guides – [W594006](#)

9 Bolts, M3 x 10 mm – [W285213](#)

10 Supernova Powerfly Cargo Rack E3 Tail Light 2 – [W1047565](#)

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

Frame guards



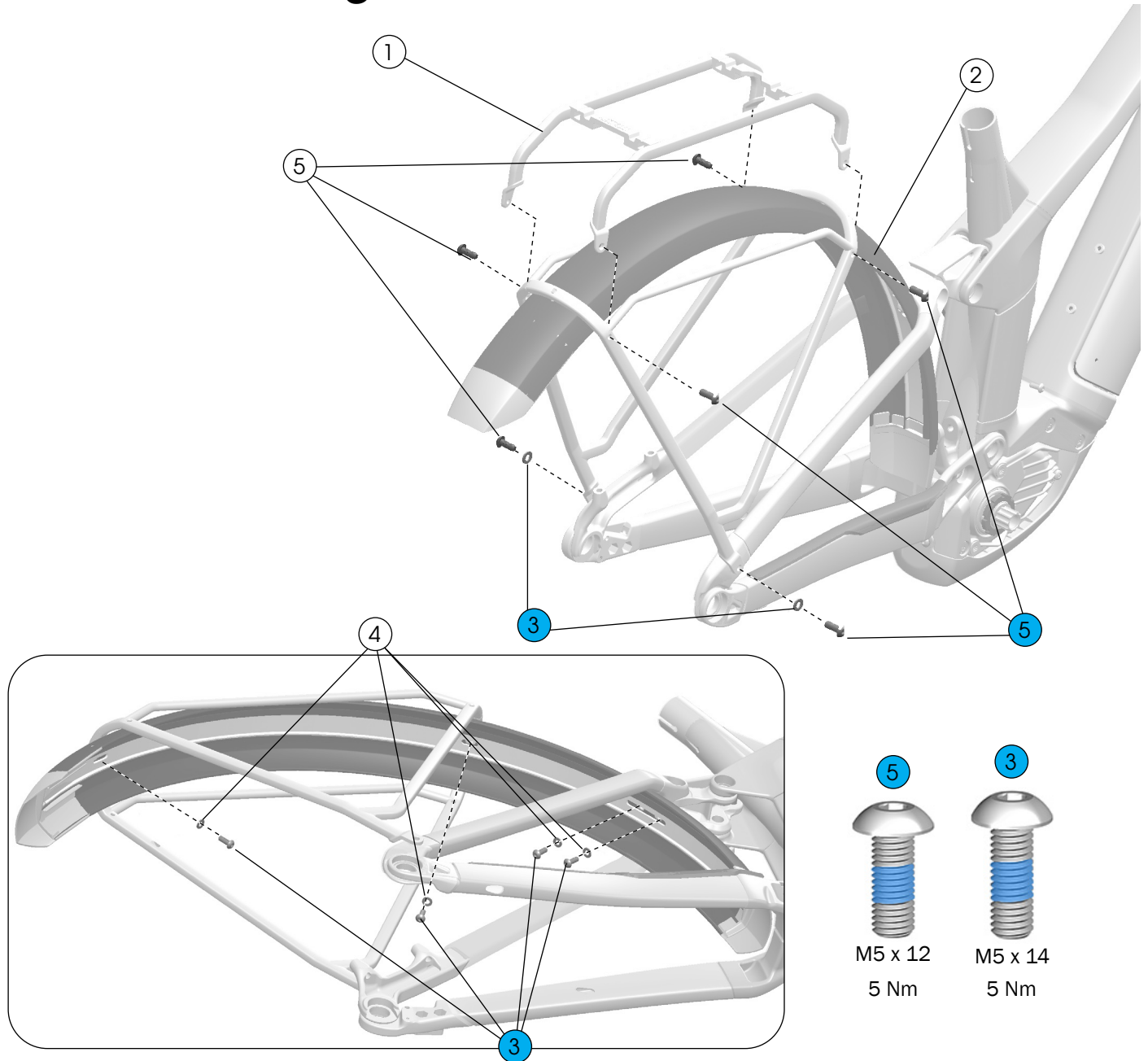
- ① Chainstay guard – [W587594](#)
- ② Drive unit guard – [W5269899](#)
- ③ Screws, stainless steel, M5x10 – [W549305](#)
- ④ Top hat spacers – [W5272256](#)

Adhesive guards ①

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

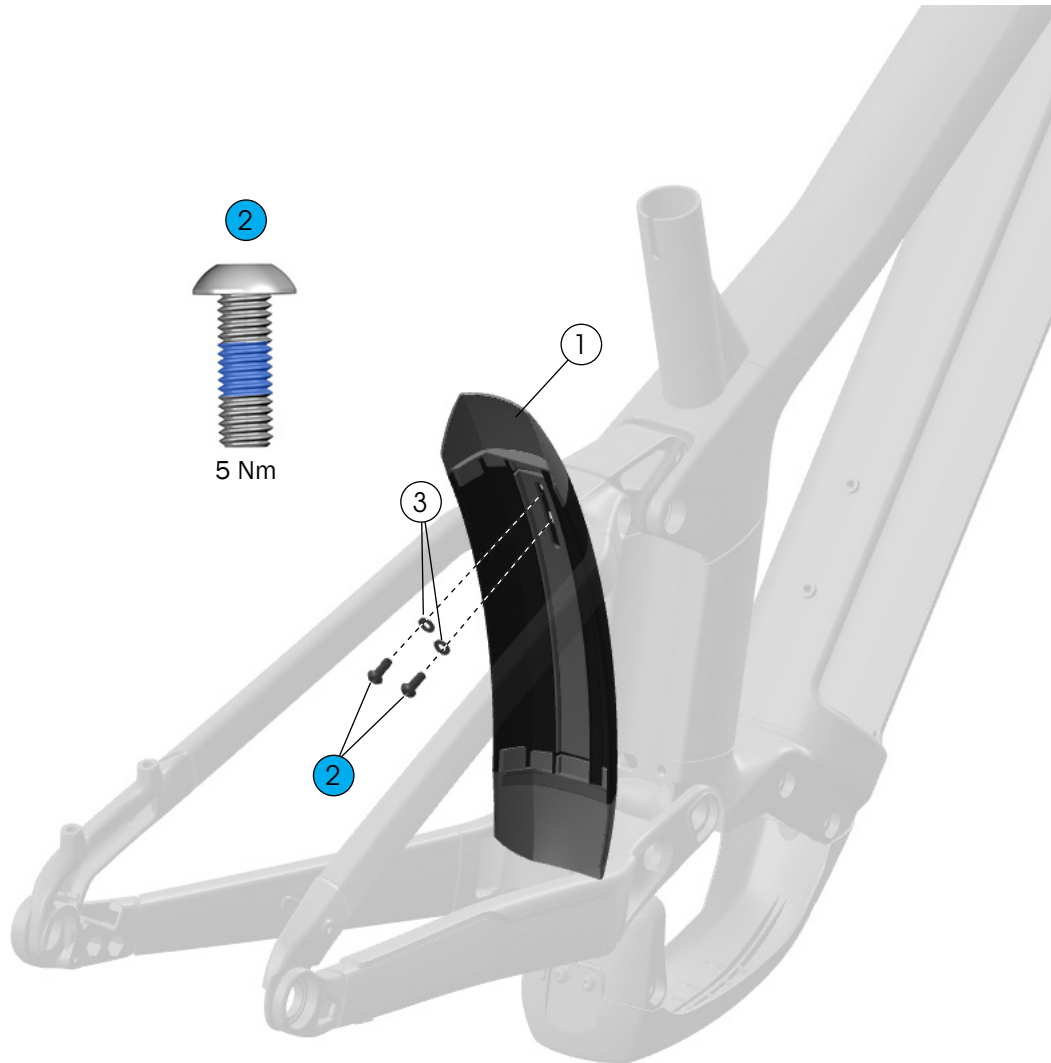
Notice: Do not clean the entire frame with isopropyl alcohol. Isopropyl alcohol could damage the paint.

Full-size rear mudguard and rack



- ① Rear rack – [W5289962](#)
 - ② Rear mudguard – [W600725](#)
 - ③ Bolts, stainless steel , M5 x 14 mm
 - ④ Washers, stainless steel, M5 x 1 mm
 - ⑤ Bolts, stainless steel , M5 x 12 mm – [W584855](#)
- [5251710](#)

Mini rear mudguard

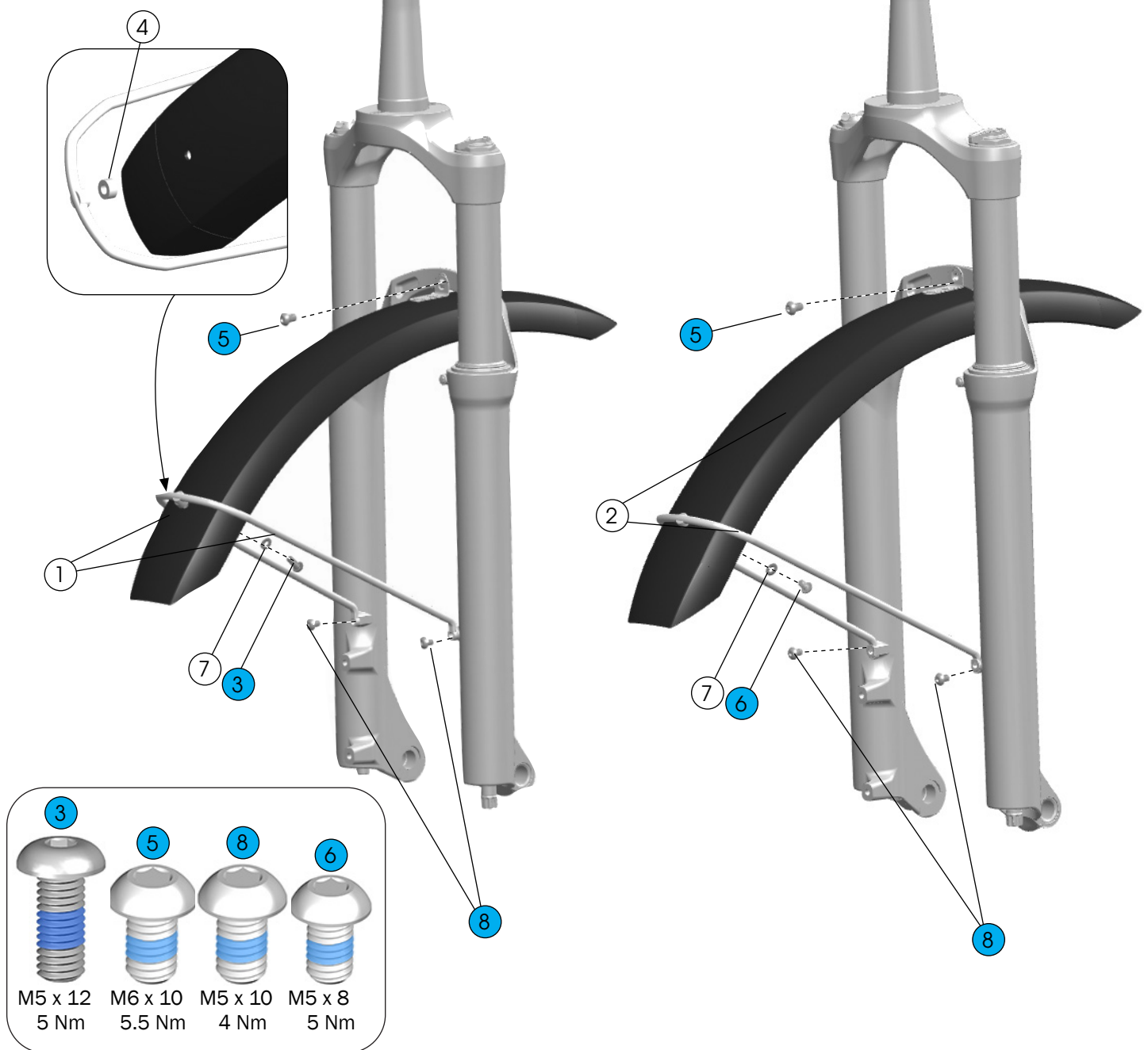


- ① Mini mudguard – [W1040072](#)
 - ② Bolts, stainless steel, M5 x 14 mm,
 - ③ Washers, flat, stainless steel, M5 x 1 mm
- [5251710](#)

Front mudguard

27.5" wheel

29" wheel

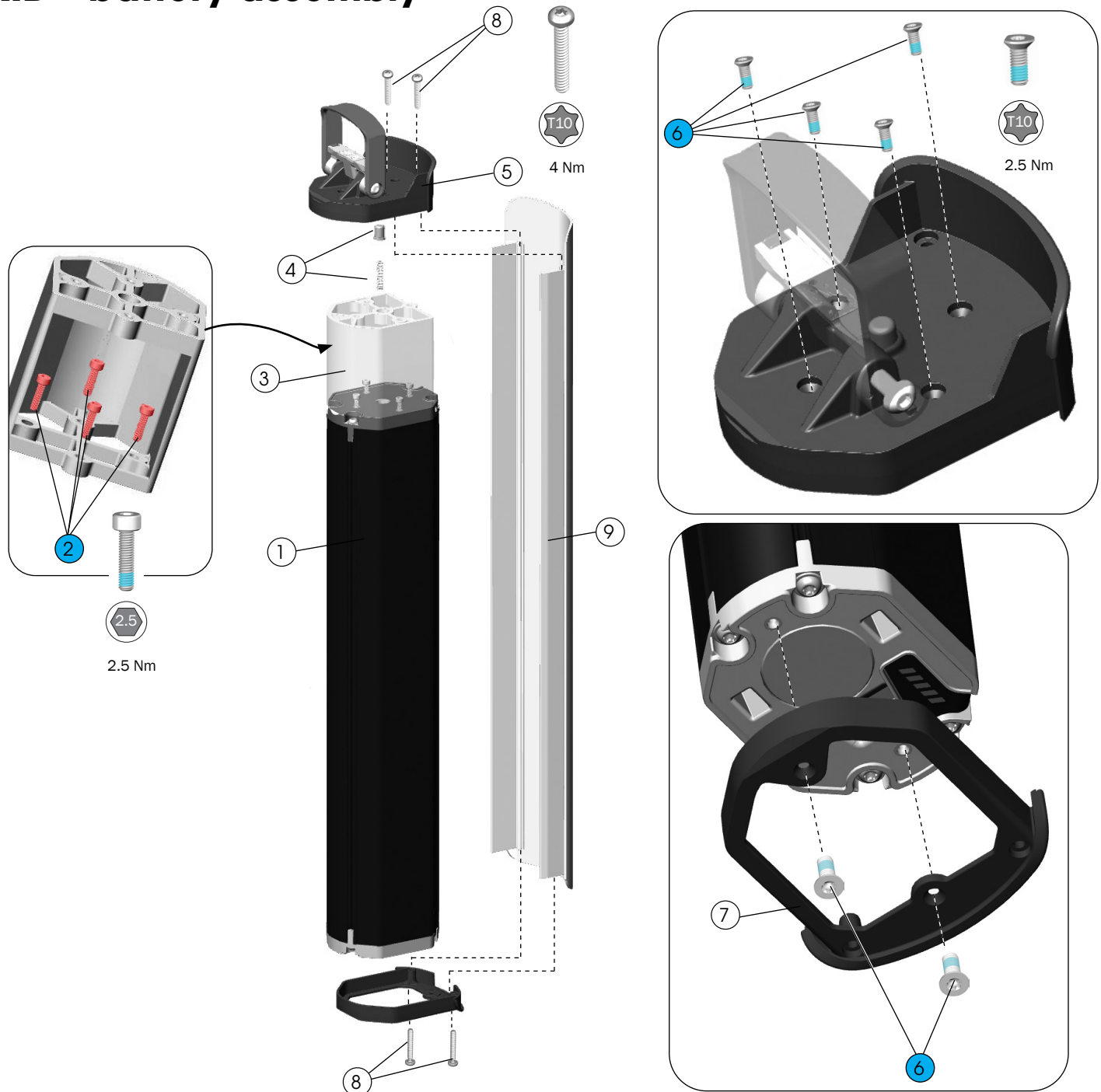


- ① Front mudguard and strut, 27.5" – [601256](#)
- ② Front mudguard and strut, 29" – [601257](#)
- ③ Screw, M5 x 12mm, stainless steel – [W584855](#)
- ④ Washer, nylon – [W506324](#)

- ⑤ Bolt, M6 x 10 mm, stainless steel (a longer bolt may be required if using a light mounting bracket)
 - ⑥ Bolt, M5 x 8 mm, stainless steel
 - ⑦ Washer, M5 x 1 mm, stainless steel
 - ⑧ Bolts, M5 x 10 mm, stainless steel – [W549305](#)
- [601267](#)

*Mudguard parts for 29 wheels are compatible with only the originally equipped SR SUNTOUR fork.

RIB - battery assembly



① Battery, Vertical, Smart System,
500 Wh - EB12.100.018*
625 Wh - EB12.100.012*

② Socket head screws, M3 x 12 mm - [W5257054](#)

③ Spacer (for use with 500 Wh battery) - [W5252256](#)

④ Push pin and spring - [5312675](#)

⑤ Battery handle assembly - [W5252236](#)

⑥ Bolts, M3 x 8mm - [W5269016](#)

⑦ Docking bracket - [W5252240](#)

⑧ Bolts, M3 x 20mm - [W5254060](#)

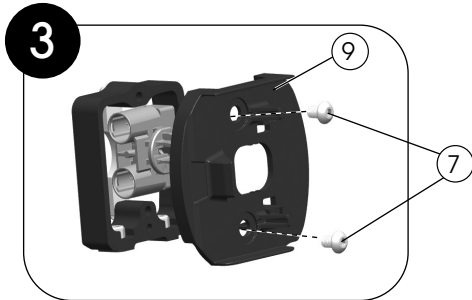
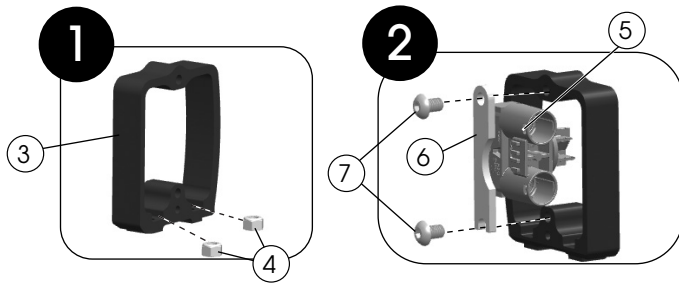
⑨ Cover - [44370](#)

Search trekbikes.com to find the colour-matched part for your bike.

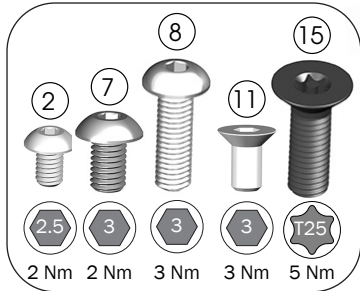
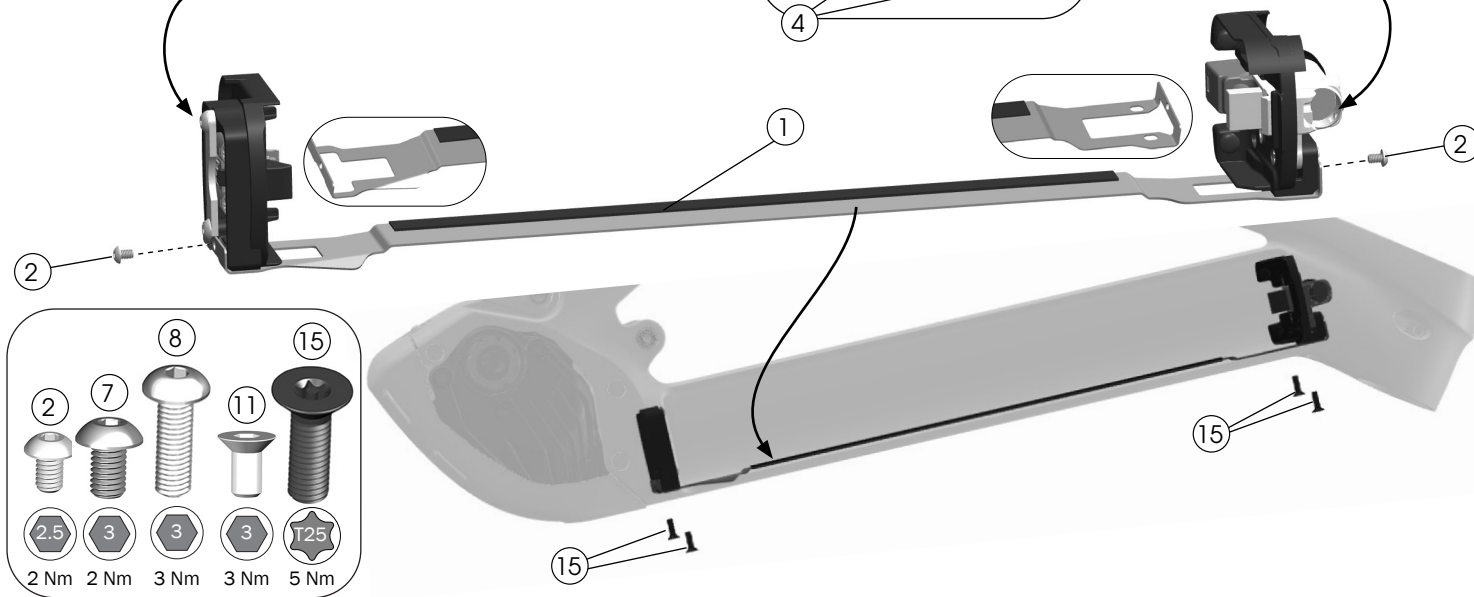
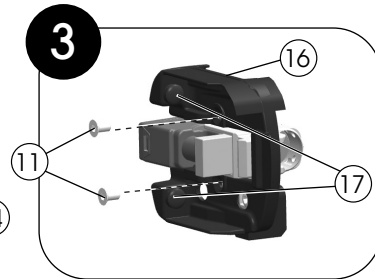
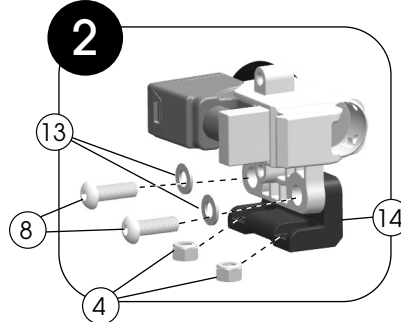
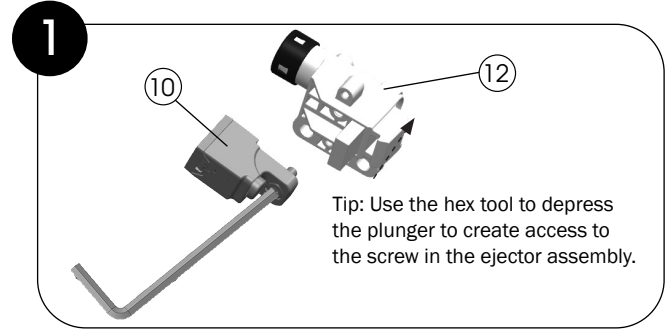
*Bosch part number. Not available on trekbikes.com.

RIB - docking assembly

Lower assembly



Upper 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](#)

⑤ Battery connection plug – EB12.100.015*

⑥ Power connection retention bracket

⑦ Screws – W549307

⑨ Lower battery mounting plug – [W52522.3](#)

⑯ Upper lock cover – [W5252292](#)

⑰ Bumpers – [579326](#)

⑩ Ejector assembly – [579324](#)

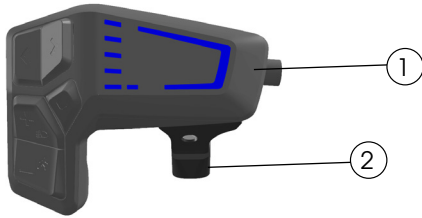
⑫ Lock assembly – [W562311](#)

– [5312122](#)

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

Remote and displays

LED remote



- ① LED remote – [5288736](#)
- ② LED remote universal clamp – [5288743](#)

Kiox 300



Kiox 300 – [5288735](#)

Intuvia 100

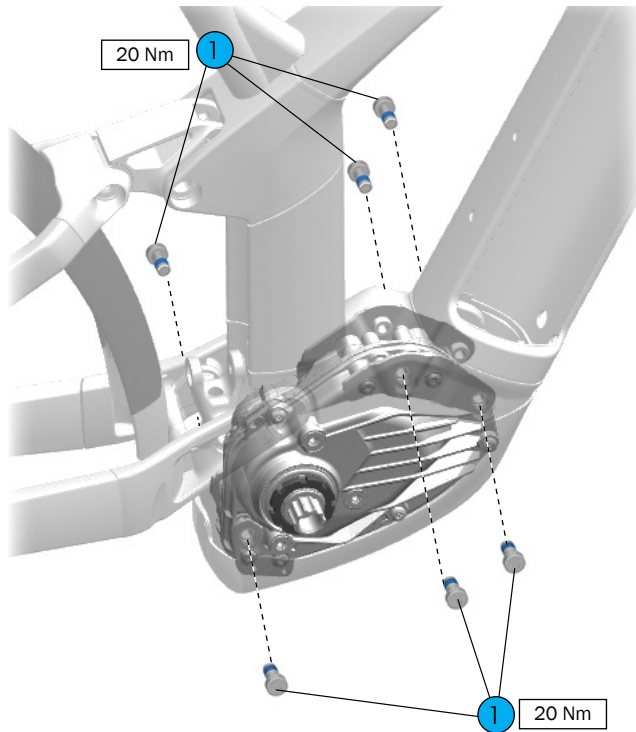


Intuvia 100 – EB13.100.00F

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

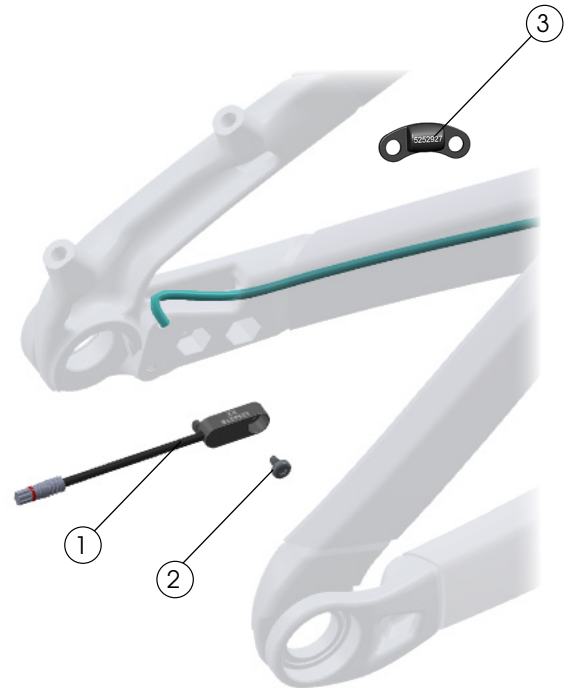
Drive system components

Drive unit and mounting bolts



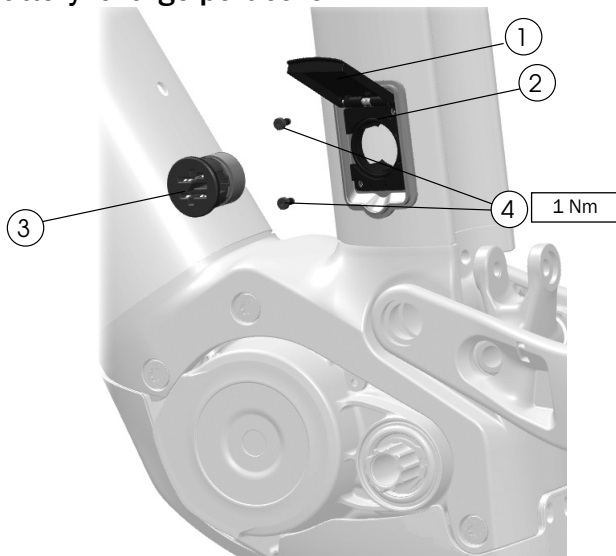
- ① Mounting bolts, TP40 – [5265419](#)

Speed sensor



- ① Speed sensor – [5284750](#)
 ② Bolt – [W562831](#)
 ③ Rotor mount speed sensor magnet – [W5252927](#)

Battery: charge port cover

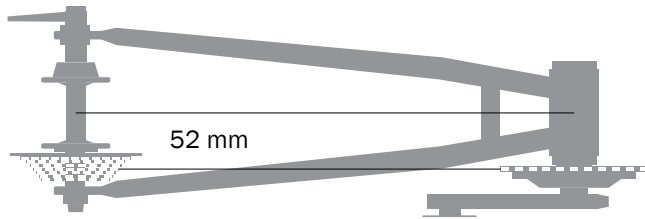


- ① Charge port cover – [44373](#)
 Search trekbikes.com to find the colour-matched part for your bike.
 ② Base – [W5251862](#)
 ③ Charge socket – EB12.120.04A*
 ④ Bolts, M3 x 6mm – [W5276241](#)

*Bosch part number. Not available on trekbikes.com.

Specifications

Chain line (1x only)



- Boost hub with offset chain ring.

Max chain ring (1x only)

- 46T

Rear brake mount

Minimum	Maximum
180 mm, direct mount	Adaptable to 203 mm

Maximum tyre size

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 6mm clearance above and on both sides of the tyre.

Frame	Maximum tyre size
XS, S	27.5" x 2.6"
M, L, XL	29" x 2.6"

Water bottle fit

XS and S frames: Use a Bontrager side-load cage and a 621 ml bottle.

Seat post



WARNING

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.

Measurement

Maximum insertion	Frame	
	XS	180 mm
S	207 mm	
M	215 mm	
L	246 mm	
XL	297 mm	
Seat tube inside diameter	31.6 mm	
Seat tube post clamp outer diameter	36.4 mm	

Fork

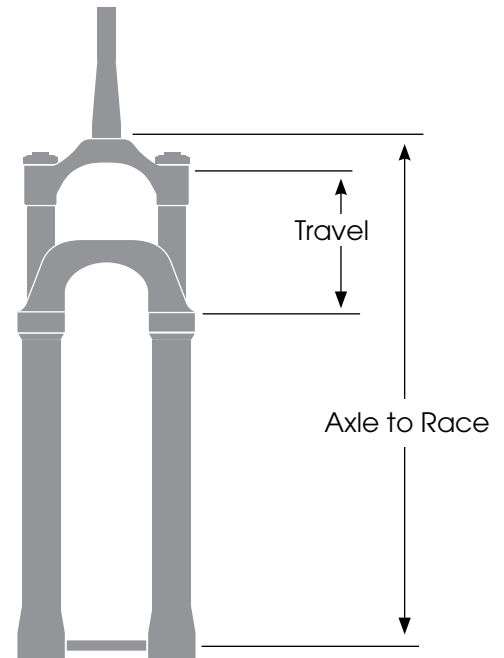
Refer to the suspension set-up card included with your bike or the suspension calculator at

[Trebikes.com/suspension-calculator](https://trekbikes.com/suspension-calculator).



WARNING

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



Frame size	Axle to Race (mm)		Travel (mm)
	Recommended	Maximum	
XS, S	Recommended	505.5	100
	Maximum	520	
M, L, XL	Recommended	540	120
	Maximum	545	