

2023 FETCH+ 4

SERVICE MANUAL

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Kickstand



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About this manual

Scope

This manual contains parts diagrams, specifications (such as grease and torque values), instructions, and helpful tips (such as the easiest direction to route cables).

This manual does not contain instructions on all components (such as brake calipers). Refer to the original manufacturer for more information.

Working on a front cargo bike

The length, weight, and box size make working on this bicycle more difficult. Do not use a regular repair stand to lift the bicycle — use a ceiling-mounted hoist.

If you do not have a hoist, you can do many repairs by tipping the bicycle on it's side.

Interactive models

Additional info

There are additional manuals available at Trekbikes.com/ manuals.

- E-Cargo Owner's Manual comprehensive instructions that come with your bicycle
- Bosch BES3 E-bike Manual detailed instructions on the e-system found under Electric bikes > 2023

Legend



Zip tie

Nm

Torque value



Apply threadlocker



Apply appropriate grease

Warnings



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.



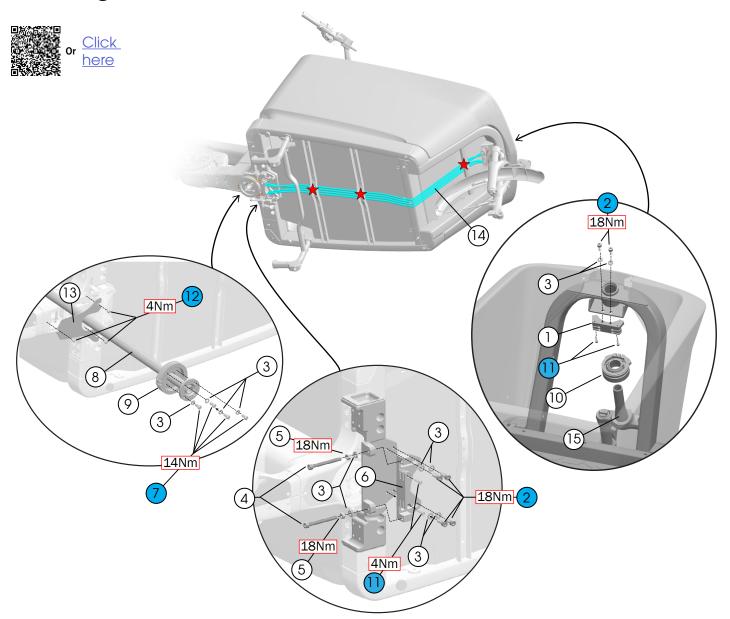
WARNING

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.

TREK

Steering: cable system



(1) Cable mount (front) — <u>W5257125</u>

5284657

- 2 Bolts (M8x20mm)
- 3 Washers (M8)
- (4) Bolts (M8x80mm)
- 5 Nuts (M8)
- 6 Cable mount (rear) <u>W5257126</u>
- 7 Bolts (M8x20mm) <u>5284656</u>

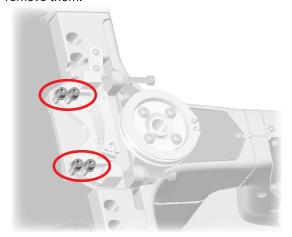
- 8 Steerer tube (rear)
- 9 Steering disc (rear)
- 10) Steering disc (front) $-\frac{5284720}{10}$
- Bolts (M5x20mm) <u>5304417</u>
- 12 Bolts, T25 drive (M5x10mm) <u>5284857</u>

5284549

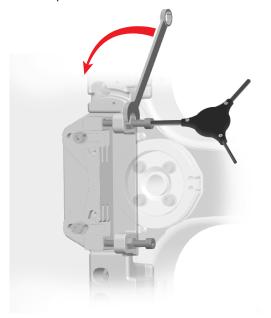
- (13) Steering column cover <u>W5268883</u>
- (14) Steering cables <u>5284692</u>
- (15) Fork <u>W5266799</u>

Steering: adjust cable tension

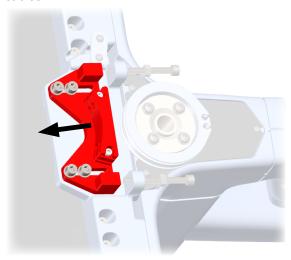
 Loosen the four rear cable mount bolts (2) — do not remove them.



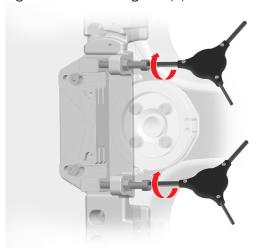
2. Hold the tensioning bolt (4) in place and use a 13mm wrench to loosen the tensioning nut (5). Then, loosen the tensioning bolt (4) to remove tension from the cables. Repeat for the other side.



3. Move the cable mount (6) to increase tension in the cables.



4. Tighten both tensioning bolts (4) — alternating between them to keep the cable mount parallel — until they are snug into the cable mount (6). Then, tighten both tensioning nuts (5) to 18Nm.



- 5. Test the front wheel steering and adjust the cable tension, if necessary. There should be no noticeable slack when steering quickly.
 - Too loose the wheel will feel disconnected from the steering.
 - Too tight the steering will feel heavy with a lot of friction.

Notice: If the cables are too tight, the bearings will wear out much faster than if the cables are tensioned properly.

- 6. Tighten all four rear cable mount bolts (2) to 18Nm (see Step 1).
- 7. Tighten both tensioning nuts (5) to 18Nm.

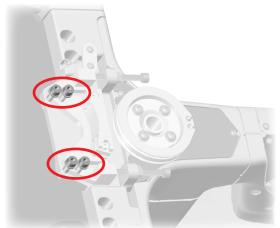
Steering: replace steering cables

Replace all four cables every two years or 10,000km/6,000mi.

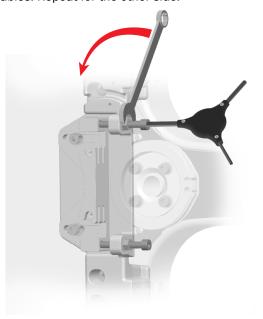
NOTE: If a cable is damaged and needs repair, replace all four cables — not just the damaged one.

Remove the cables from the rear disc

- 1. Cut the three zip ties connecting the steering cables to the frame (see the zip tie locations on page 1).
- 2. Loosen the four rear cable mount bolts (2) do not remove them.



3. Hold the tensioning bolt (4) in place and use a 13mm wrench to loosen the tensioning nut (5). Then, loosen the tensioning bolt to remove tension from the cables. Repeat for the other side.



4. Remove the two bolts (11) securing the steering cables in the rear cable mount.



- 5. Slide the cable mount (6) towards the steering disc to relieve tension on the cables.
- 6. Remove the cables from the steering disc.

Remove the cables from the front disc

1. Loosen the two bolts (11) securing the steering cables in the front cable mount (1).



2. Remove the cables from the front steering disc.



Steering: replace the steering cables (continued)

Insert the cables into the front disc

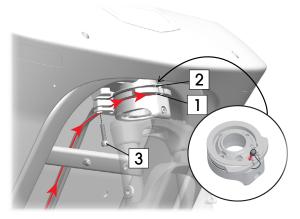
NOTE: The cables may be slightly different lengths — there is no certain order you need to install them. They will stretch and even out after use.

1. Route the four cables through the frame brackets.



2. Route one cable into the lower section of the front steering disc. Then, route another cable in the upper section. Install one bolt (12) into the cable mount and torque to 4Nm to secure the two cables.

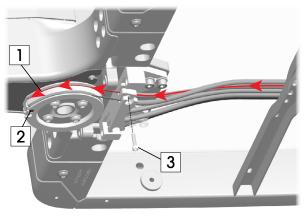
IMPORTANT: Make sure the cable end stop is fully inserted into the cable mount or you will not have enough slack when you install the cables in the rear disc.



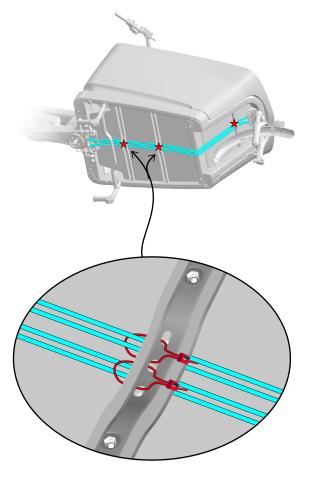
3. Repeat Step 2 for the other side.

Insert the cables into the rear disc

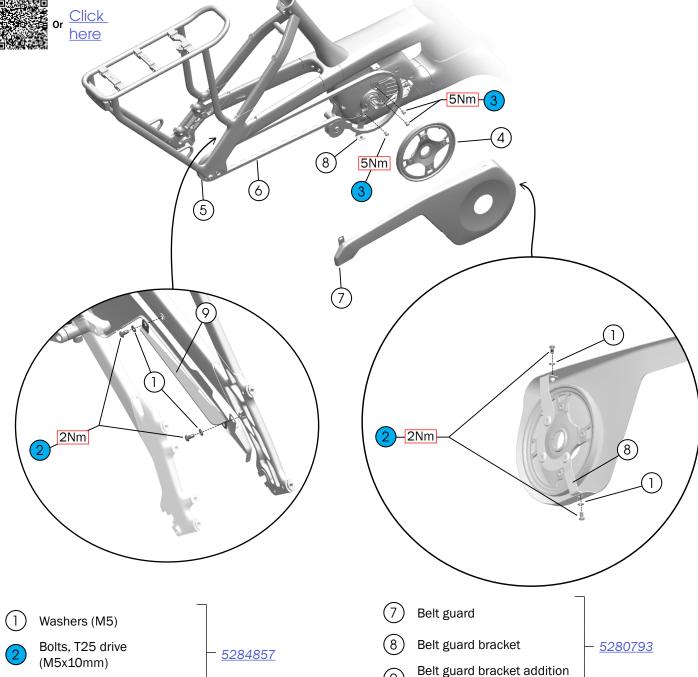
1. Route the rear cables as shown below.



- 2. Tension the cables followings Steps 3-7 on page 2.
- Use six zip ties to attach the cables to the frame as shown below.



Drivetrain: belt guard



- Bolts (M6x10mm)
- 4) Beltring (50T) <u>W5285189</u>
- (5) Sprocket (22T) <u>W590978</u>
- (6) Belt (128T) <u>W571473</u>

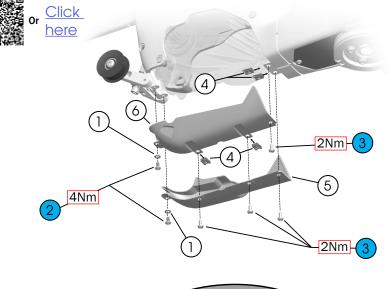
Before removing the belt

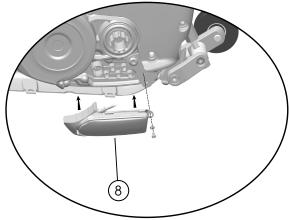
*North America only

- Remove the belt guard
- Remove the rear wheel
- Remove the driveside crank arm
- Release tension in the belt (see page 8)

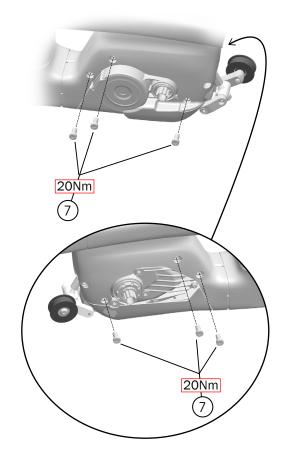
See the manufacturer's specifications for more info: <u>GatesCarbonDrive.com</u>.

Drivetrain: drive unit cover





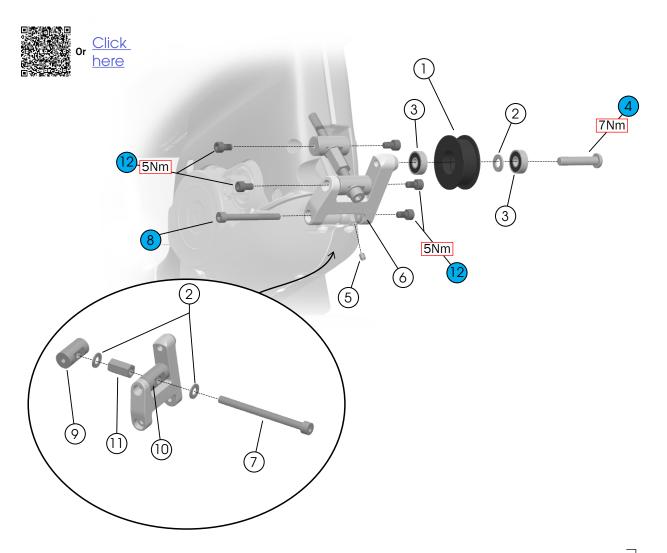
<u>5284548</u>



- (1) Washers (M5)
- Bolts, T25 drive (M5x10mm)
- Bolts, T25 drive (M4.8x13mm)
- 4 Sheet nuts (M4.8)
- 5 Drive unit cover (non-drive side)
- 6 Drive unit cover (drive side)
- (7) Mounting bolts, T40 drive (M8x16mm) *1270.016.470
- 8 Bosch connect module BCM3100 *EB13.200.02L

^{*}Bosch part numbers are not available on Trekbikes.com.

Drivetrain: belt tensioner



5291300

- 1) Belt roller
- 2) Washers (M8)
- (3) Bearings
- 4 Bolt (M8x40mm)
- 5) Bolt socket set screw <u>W5282014</u>

- 6 Tensioner arm
- 7) Tensioning bolt (M8x100mm)
- 8 Bolt (M6x60mm)
- (9) Tensioning nut (upper)
- 10 Tensioning nut (lower)
 - 1) Coupling nut
- Bolts (M6x10mm)

Drivetrain: adjust belt tension

Measure the belt tension

DESIRED TENSION: 45-60 Hz (35-45 lbs)



Gates Krikit Tension Gauge

 Measure the belt tension using a tension gauge (such as the Gates Krikit Tension Gauge). See the technical manual at <u>GatesCarbonDrive.com</u>.



Source: Gates Corporation

TIP: You can also measure the tension using the methods listed below. Trek suggests using the Gates Krikit Tension Gauge for the most precise measurement.

- Your finger push down in the middle of the belt. There should be 6-12mm of vertical movement.
- Gates Carbon Drive app on your phone this app measures belt tension through sound. Use the desired tension listed above.
- Rotate the cranks 1/4 turn and measure the tension again. Repeat this at four different positions and average the measurements. If there is not enough tension, tighten the belt following the procedure to the right.

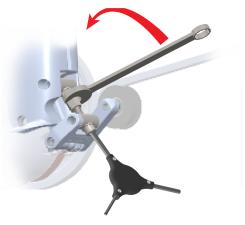
NOTE: If there is a large difference between measurements, the front beltring may be misaligned (see page 9).



Source: Gates Corporation

Tension the belt

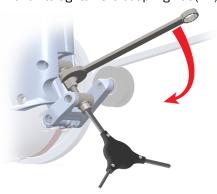
L. Hold the tensioning bolt (7) in place and use a 13mm wrench to loosen the coupling nut (11).



2. Tighten the tensioning bolt (7) until you reach proper belt tension.



- 3. Verify the belt tension at different crank positions and average the results. Tighten or loosen the tensioning bolt (7), if necessary.
- 4. Hold the tensioning bolt (7) in place and use a 13mm wrench to tighten the coupling nut (11).

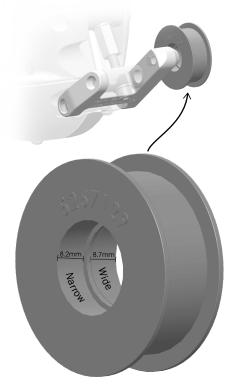


- 5. Rotate the cranks forward and backward to make sure the belt is centered on the belt roller (1).
- 6. Verify the tension and adjust, if necessary.

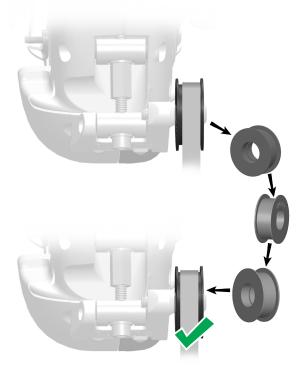
Drivetrain: align belt

Center the belt on the belt roller

The notch in the middle is slightly off-center.



The belt may become off-center in the belt roller over time. If the belt continually touches the outer belt roller edge while pedaling, flip the belt roller around 180° . This moves the belt roller 0.7mm outward.



Adjust the belt angle

The belt roller should be parallel to the belt. If the belt roller gets out of alignment, tighten or loosen the set screw (5). This adjusts the angle of the tensioner arm.

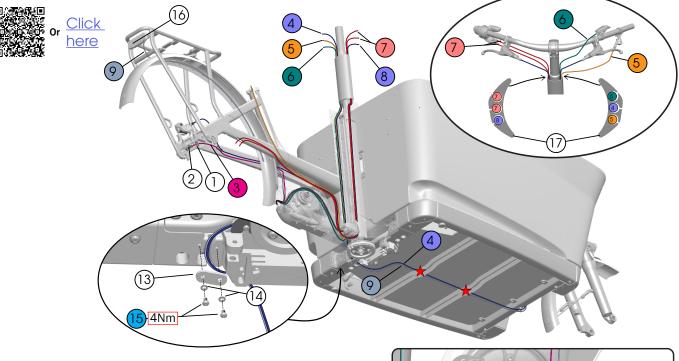


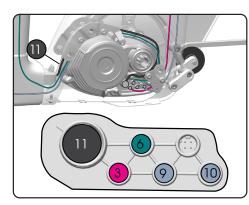
 Tighten or loosen the set screw until the belt is parallel to the belt roller.



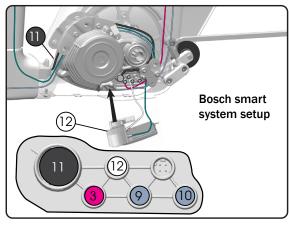
2. Verify the belt tension and adjust, if necessary (see page 8).

Routing: rear





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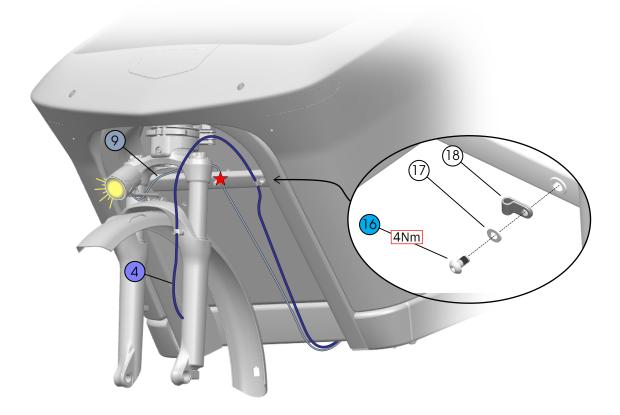


- 1 Cable manager <u>W316706</u>
- 2 Bolt (M4x6mm)
- 3 Speed sensor and wire
- 4) Front brake hose
- 5 Dropper post cable
- 6 Remote wire
- 7 Shift cables
- 8 Rear brake hose

- 9 Front light wire
- 10) Rear light wire
- Drive unit cable
- Bosch Connect Module <u>5282027</u>
 Europe and North America only
- (13) Cable bracket <u>W5290750</u>
- 14) Washers (M5)
- Bolts (M5x10mm)
- 16) Rear light <u>W504513</u>
- (17) Cable guides <u>W5309355</u>



Routing: front



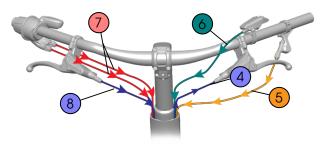
- 4 Front brake hose
- 9 Front light wire
- Bolt (M5x10mm), T25 drive
- (17) Washer (M5)

18) Cable clamp — <u>W2016621</u>

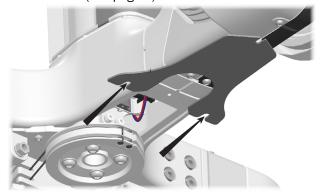
Routing: instructions

Rear headset

 Route all handlebar cables/wires/hoses down through the frame — except the front brake. Use the current housing as a guide when pulling a new one through.



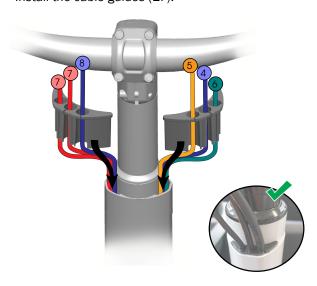
 Route the cables through the frame. Remove the steering column cover (see page 1) and non-driveside motor cover (see page 6) to access the cables easier.



NOTE: Remove the motor to have additional access to the cables (see page 6).

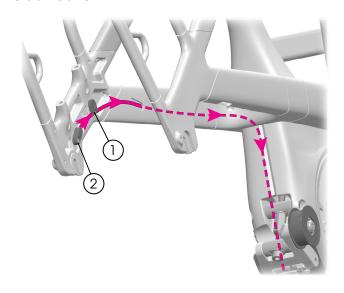
3. Install the cable guides (17).

7 / 7 / 4 / 4



Speed sensor

Route the wire from the back — through the chainstay — to the drive unit.

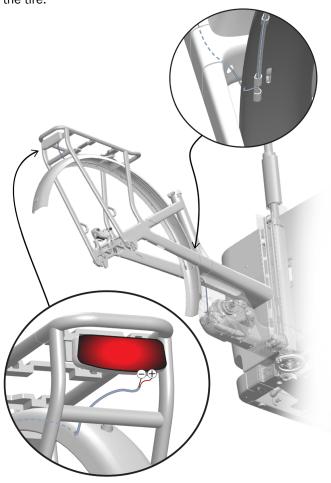




Routing: instructions (continued)

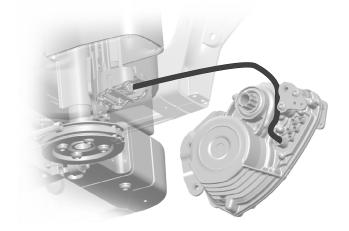
Rear light

You must remove the rear wheel to route the wire. Make sure there is no slack in the wire between the fender and the tire.



Drive unit cable

With the drive unit removed, connect the drive unit cable (11) at both ends before reinstalling the drive unit.



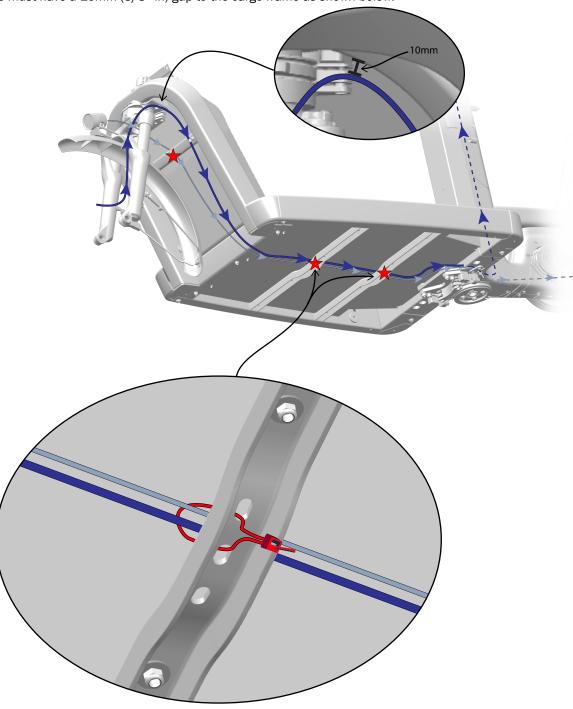


Routing: instructions (continued)

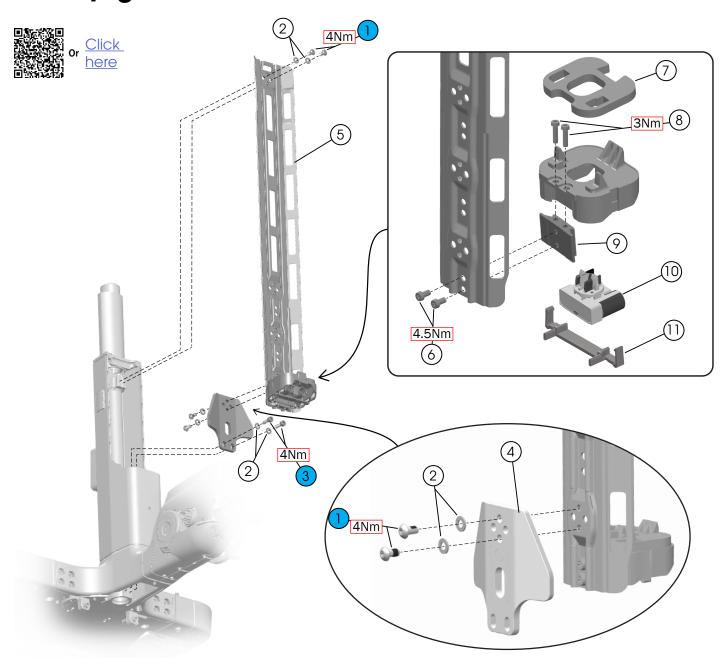
Front brake and front light

Route the front brake hose and front light wire - starting from the front - under the frame as shown below.

Note: The front brake hose must have enough slack to turn the front wheel back and forth fully — without interference. The brake hose must have a 10mm (3/8" in) gap to the cargo frame as shown below.



Battery: guide



- 1 Bolts, T25 (M5x10mm)
- 2) Washers (M5)

- <u>5284856</u>

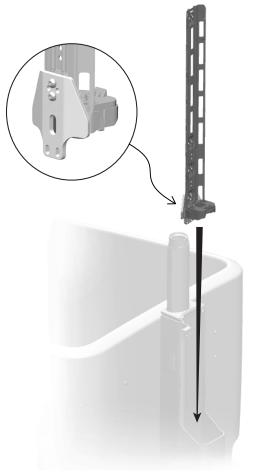
- Bolts (M5x14mm)
- (4) Mounting extension <u>W5269383</u>
- 5) Guide rail *EB12.100.01R
- 6) Bolts, T20 (M5x9mm) *EB12.100.01Y

- (7) Damper foil plug *EB12.100.01Z
- 8 Bolts, T25 (M4x16mm) *EB12.100.01X
- 9 Cradle *EB12.100.01B
- (10) Battery adapter *EB12.100.015
- (11) Clamp ring *EB12.100.02D
- *Bosch part numbers are not available on Trekbikes.com.

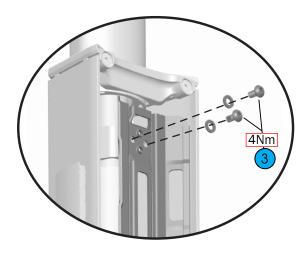
Battery: install battery guide

Make sure all cables are routed in front of the battery guide before installing it.

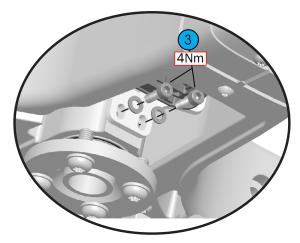
1. Insert the battery guide assembly into the frame.



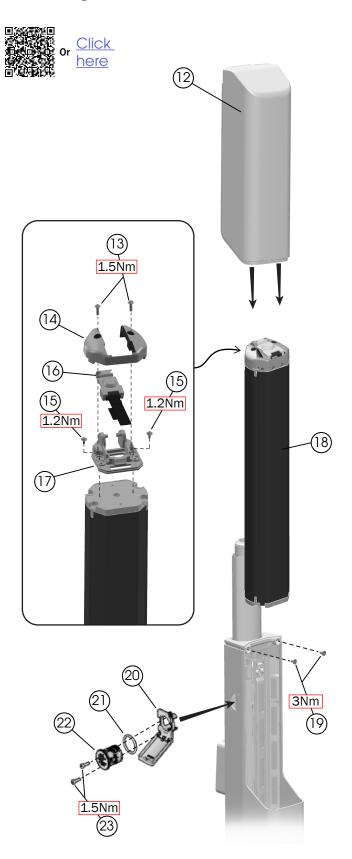
2. Install the two upper (1) battery guide bolts. Torque to 4Nm.



3. Install the two lower (3) battery guide bolts. Torque to 4Nm.



Battery: lock, cover, and charge port

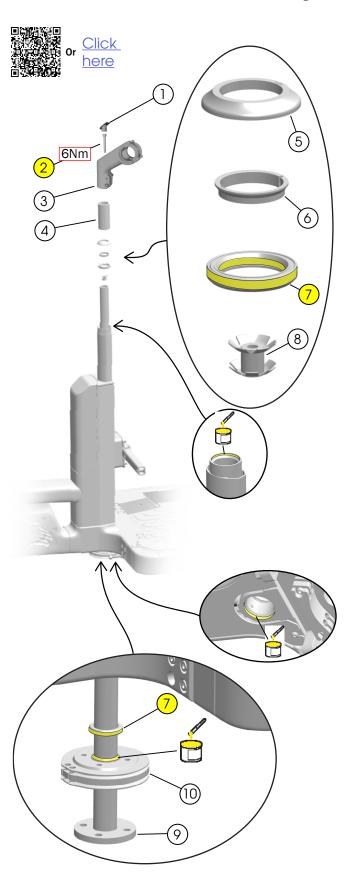


- Battery cover <u>W5257032</u>
- Bolts, T15 (M3.5x12mm) *EB12.100.01G
- Cover *EB12.100.01A
- Bolts, T15 (M3x7mm) *EB12.100.01G
- Battery lock <u>W5277876</u>
- Locking assembly *EB12.100.01D
- PowerTube 750W battery *EB12.100.00X
- Bolts (M5x10mm) <u>5272902</u>
- Charge port cover <u>W5251862</u>
- O-ring *EB12.120.019
 - Charge plug *EB12.120.04B
- Bolts (M3x10mm) 5284849
- *Bosch part numbers are not available on Trekbikes.com.

WARNINGS: BATTERY USE

- A short circuit in the electric system and/or damage to the battery might lead to over-heating. In an extremely rare case, a battery that has been severely impacted could potentially catch fire.
- Only charge the battery with a Bosch smart system charger. Using the wrong charger risks the life of the battery and presents a potential fire hazard.
- Only use the charger in dry, indoor areas.
- Do not leave a charging battery unattended.
- · When the battery is fully charged, disconnect the charger from the battery and wall socket.

Headsets: rear assembly



- 1) Stem cover <u>5307966</u>
- 2 Compression bolt

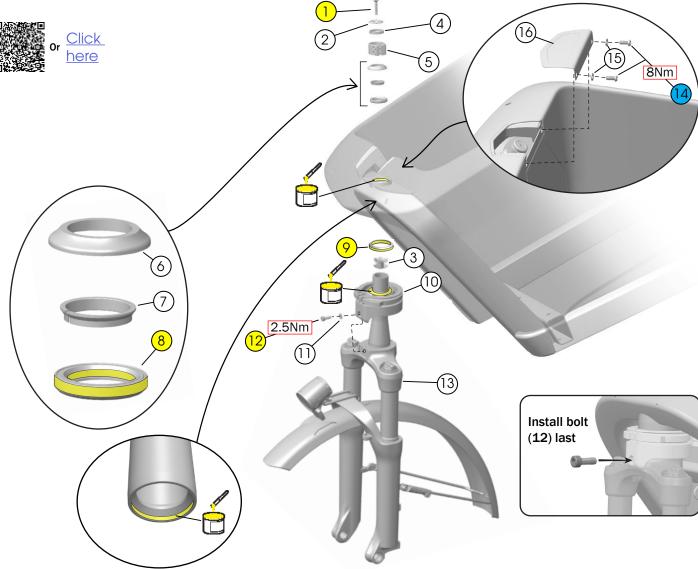
W5297608

- (3) Stem
- (4) Stem spacer <u>W5295111</u>
- (5) Bearing cover <u>W5283853</u>
- (6) Compression ring <u>W532842</u>
- 7 Headset bearings <u>W531676</u>
- 8) Compression nut (1") <u>63374</u>
- 9 Steerer tube
- (10) Steerer disc

5305201

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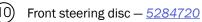


<u>W545877</u>

426180

- Compression bolt (M6x35mm)
- Top cap
- Compression nut (1 1/8")
- Spacer (5mm) $-\frac{5253928}{}$
- (5) Headset collar - W5257186
- Bearing cover
- Compression ring
- Headset bearing (upper)
- Headset bearing (lower)

- Suspension fork W5266799
- Bolts, T40 drive (M8x20mm)
 - Washers (M8)
 - Headset lid <u>5280797</u>



Washer (M5)

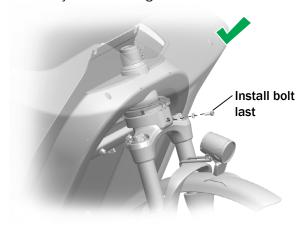
Bolt (M5x14mm)

Headsets: instructions

Install the front headset/fork

- 1. Assemble the headset/fork and tighten the compression bolt (1).
- 2. Install the bolt (12) and washer (11).

NOTE: If you do this in the reverse order, the assembly can be misaligned.



Remove the steering cables before uninstalling either headset assembly

See pages 3-4 for instructions on how to remove them.

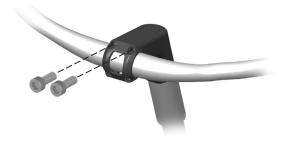
NOTICE: If you do not remove the steering cables before uninstalling the headset, they can get damaged by the weight of the steerer tube.

Verify rear headset tightness

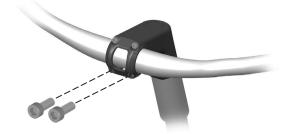
- Hold the stem (3) and move it up/down and forward/ backward to ensure the headset is assembled and tightened properly. The steering should be responsive, direct, and without play.
- 2. If there is play, reassemble and tighten the headset parts as necessary (see page 17).

Stem clamp bolts tightening order

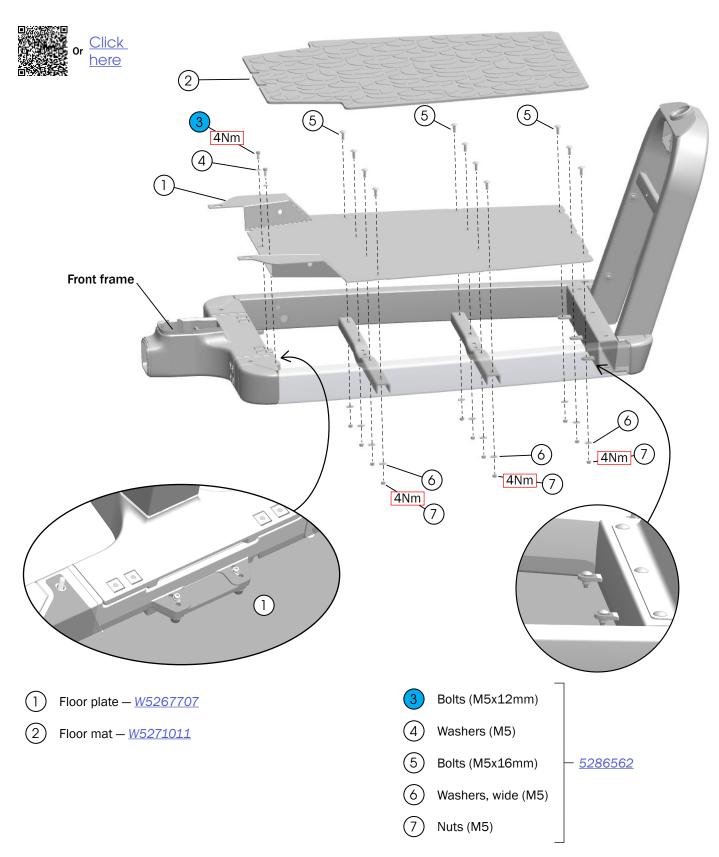
1. Tighten the top two bolts to 10Nm.



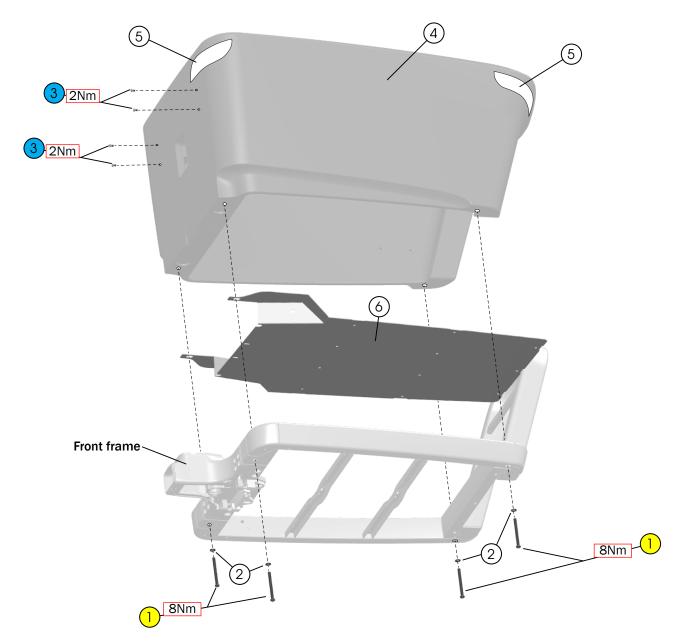
2. Tighten the lower two bolts to 10Nm.



Frame: floor plate and mat



Frame: cargo box

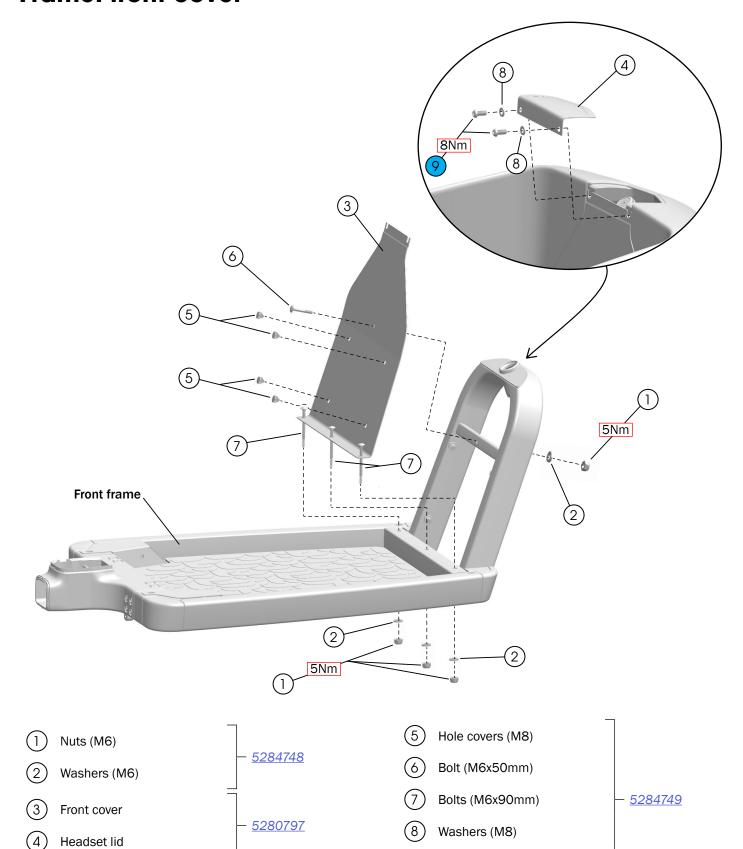


- Bolts (M8x90mm)
- 2) Washers (M8)
- 3 Bolts (M5x10mm) <u>5284749</u>

<u>5284748</u>

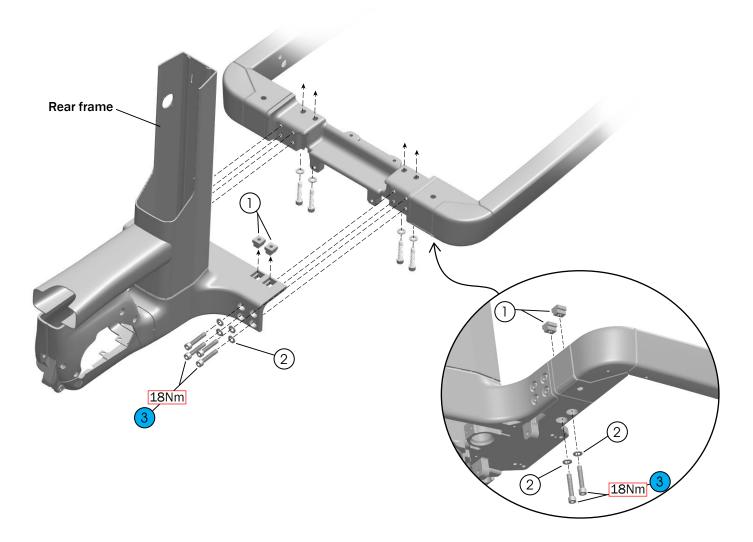
- \bigcirc Cargo box $-\frac{5280798}{}$
- (5) Decals <u>5291298</u>
- 6 Floor plate <u>W5267707</u>

Frame: front cover



Bolts, T40 drive (M8x20mm)

Frame: frame assembly

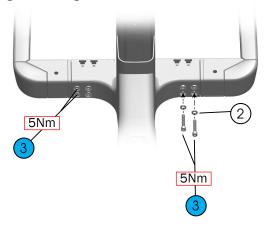




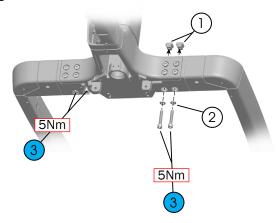
IMPORTANT: If connecting the front and rear frame together, follow the frame tightening sequence on page 25.

Frame: frame tightening sequence

1. Tighten the eight horizontal bolts to 5Nm.



2. Tighten the four vertical bolts to 5Nm.



3. Fully tighten the eight horizontal bolts — in an X pattern — to 18Nm in the order shown below.

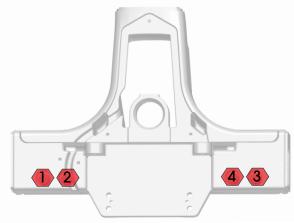




Bottom

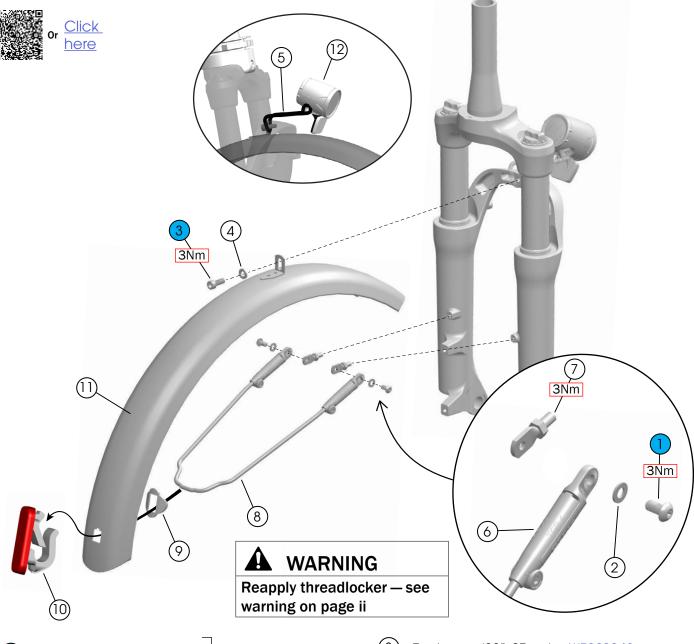
4. Fully tighten the four vertical bolts — outside first — to 18Nm in the order shown below.

Rear



Front

Accessories: front fender and light



Bolts, T25 drive (M5x10mm)

<u>5284747</u>

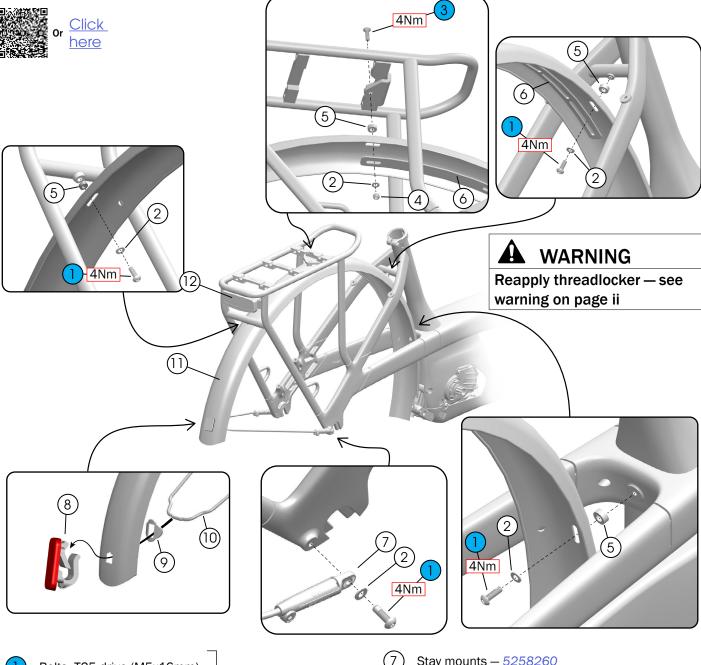
5286558

- Washers (M5)
- Bolt (M6x16mm)
- Washer (M6)
- (5) Light bracket
- 6 Stay mounts <u>5258260</u>
- 7 Mount bolts <u>W331954</u>

- 8 Fender stay (20"x65mm) <u>W5269940</u>
- Stay holder
- 10) Stay damping rubber
- 11) Front fender <u>W5269617</u>
- 12) Front light <u>598624</u>

<u>5258253</u>

Accessories: rear fender and light



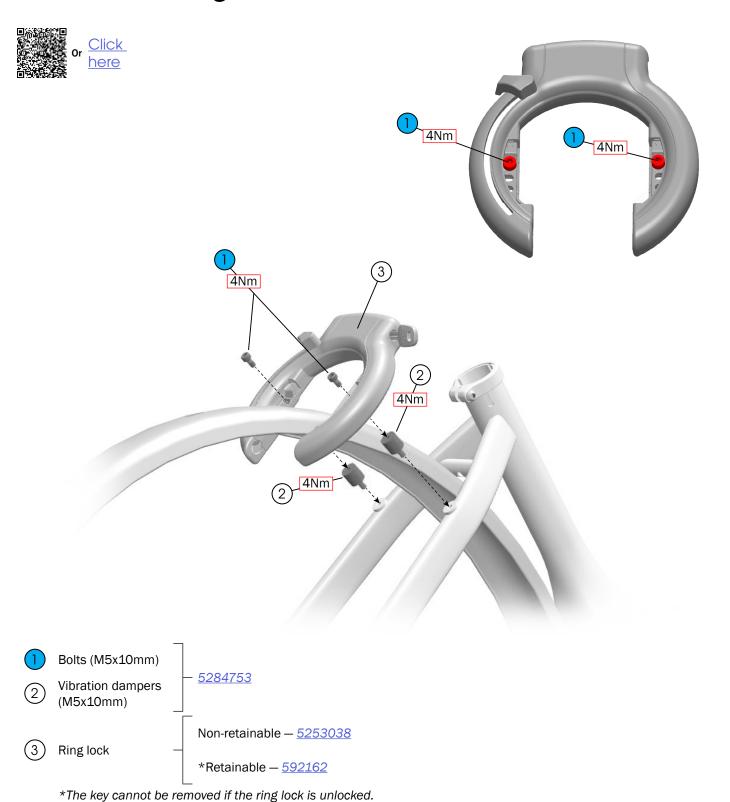
Bolts, T25 drive (M5x16mm)

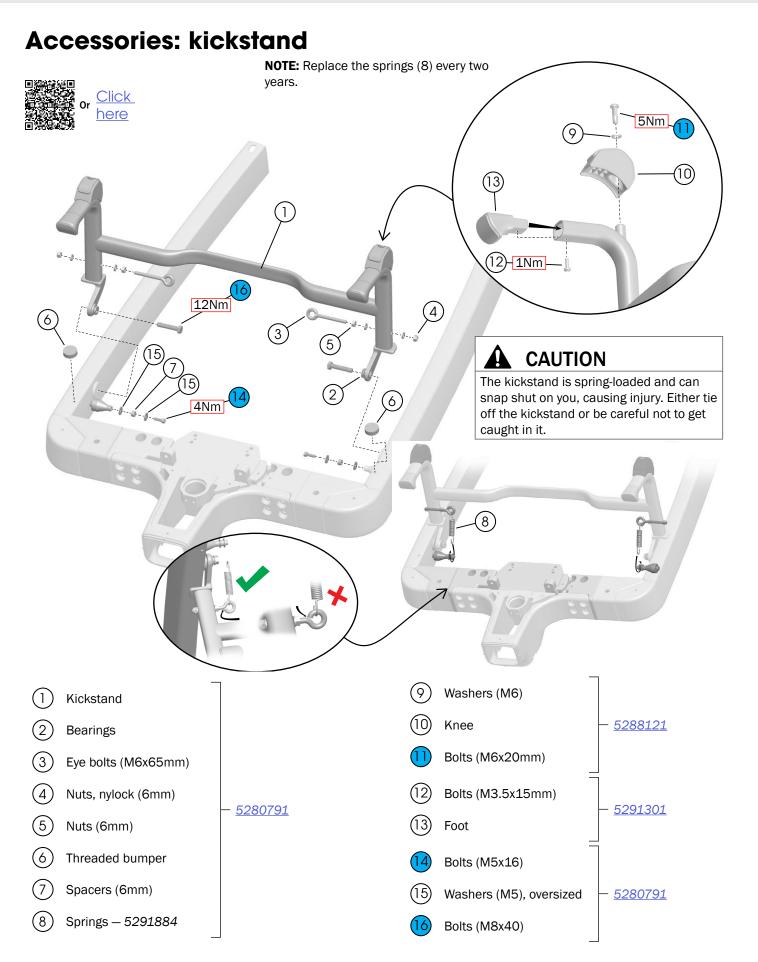
- 5284754

- Washers (M5)
- Bolt (M5x18mm)
- Nut (M5)
- Spacers (5mm) <u>5307541</u>
- Strut (380mm) W600320

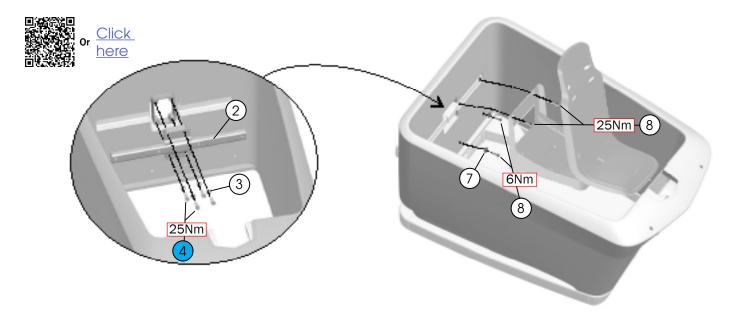
- Stay mounts <u>5258260</u>
- Stay holder
- Stay damping rubber
- Fender stay (27.5"x65mm) <u>W5269996</u>
- Rear fender <u>W5269618</u>
- Rear light * W504513 *Replacement part is different than the original

Accessories: ring lock

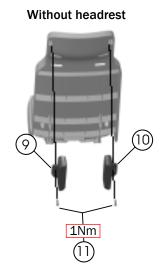




Accessories: child seats

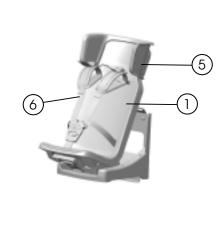


With headrest (10) 1Nm (12)

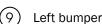


5286564

5291431



- Child seat <u>5283900</u>
- Crossbar mount W5270763
- Washers (M8)
- Bolts (M8x25mm)
- (5) Headrest - <u>5298521</u>
- Harness <u>5291779</u>
- Mushroom fasteners
- Bolts (M8x16mm)

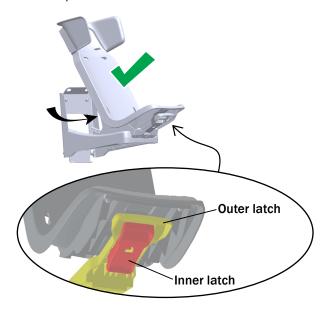


- Bolt (16mm), without headrest <u>W5313645</u>
- Bolt (25mm), with headrest <u>W5313646</u>

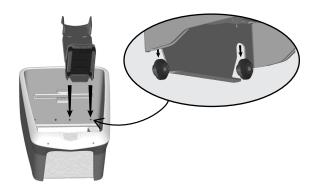


Accessories: install the child seats

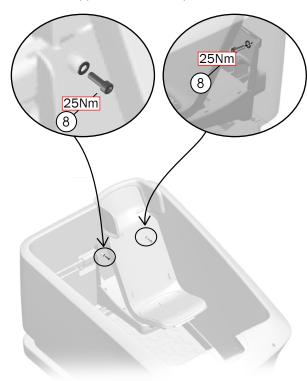
1. Pull the inner latch and put the seat in the fully reclined position.



2. Slide the seat down onto the mushroom fasteners.



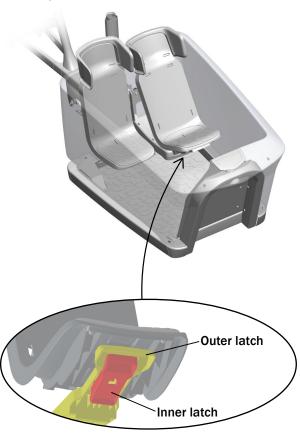
3. Install the upper bolts and torque to 25Nm.



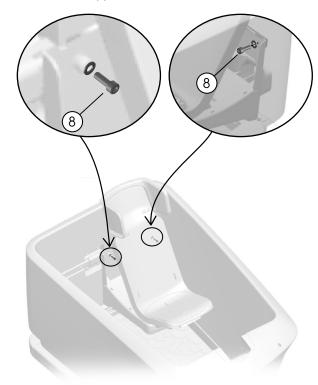
- 4. Put the seat in the fully upright position.
- 5. Install the other seat following Steps 1-4.

Accessories: remove the child seats

1. Pull the inner latch and put one seat in the fully reclined position.



2. Remove the upper bolts.



- 3. Pull the seat up and remove it.
- 4. Remove the other seat following Steps 1-3.

Parts list

Wheels

	Part number	
Front wheel	W5292177	
Rear wheel	W5292180	
Front rim	W5283286	
Rear rim	W5283287	
Hub axle	5304638	
End caps	436181	
Axle bearings	431759	
Rim strip (20")	W5280094	
Rim strip (27.5")	W332413	
Tire pick-up twinskin (20")	W5273457	
Tire pick-up twinskin (27.5")	W5273456	

Cranks

	Part number
Crank prowheel ISIS 170mm	W571998
Crank bolts	W572003

Brakes (Tektro)

	Part number
Brakeset Dorado Cargo HD-T737	W5280220
Brakeset Dorado Cargo HD-E737R	W5280221
Rotor TR-17 180mm 2.3mm	5293931
Rotor TR-17 203mm 2.3mm	5293932
A-11 PM to PM Spacer 20mm	1048801
A-12 PM to PM Spacer 23mm	1048802
Hydraulic brake fluid 100mL	5295307
Q13RS 5.0mm	5293929
Olive & barb Dorado Auriga Comp Draco	5293930

Seatpost (TranzX)

	Part number
Seatpost 31.6 120mm with dropper post	W571998

Specifications

		Fetch+ 4
Rear hub OLD		142mm
Tire width max 700c	Front	25mm
	Rear	28mm

Dropper post stiffness

Weight of rider	Pressure
>50-70kg	200-230PSI
75-100kg	230-260PSI
100-125<	260-300PSI