2018
Bullitt Assembly Manual
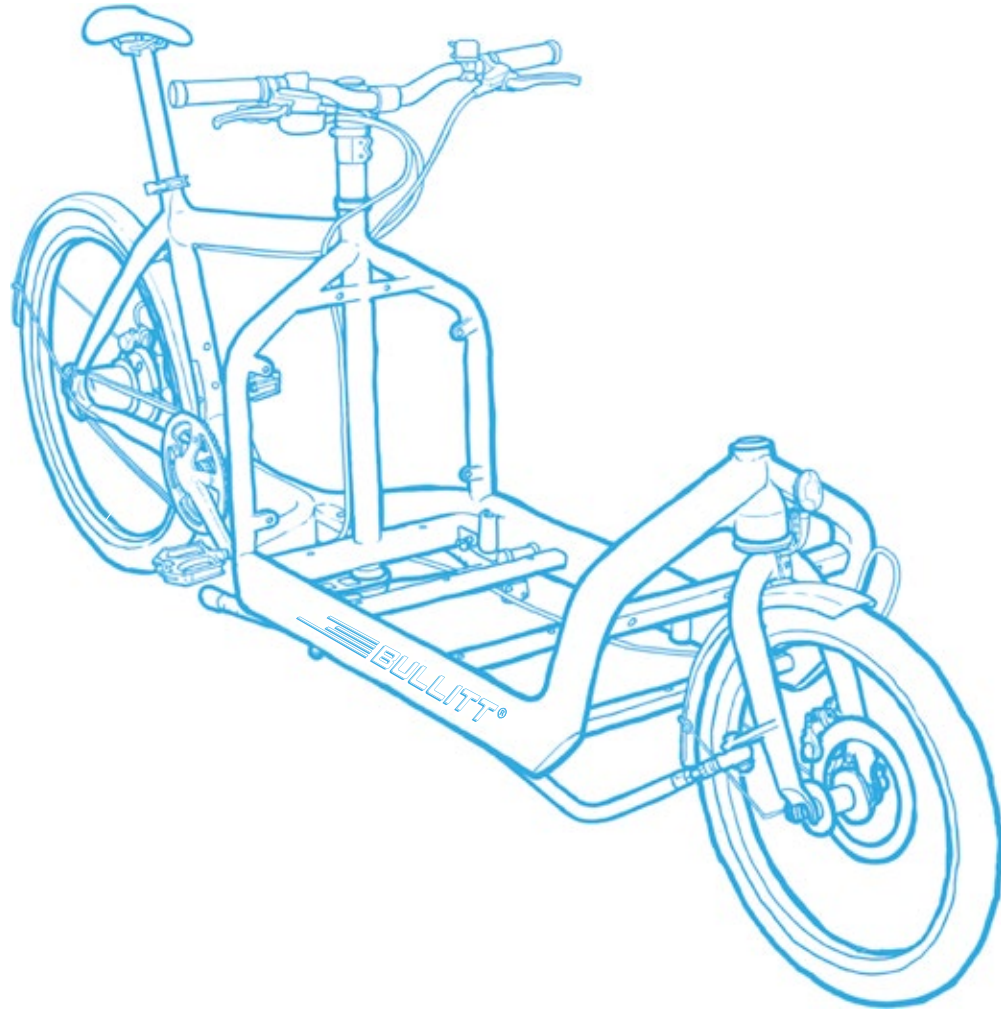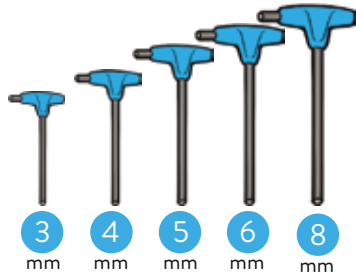
LARRY
vs HARRY

Before you start

Tools required

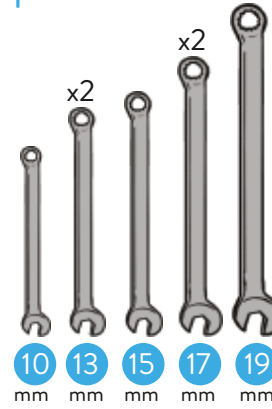**Grease**

Allen/Hex key
- 3 mm
- 4 mm
- 5 mm
- 6 mm
- 8 mm

Torx
- 25 TX

Screwdriver
- Phillips

Wrenches
- 10 mm
- 13 mm x2
- 15 mm
- 17 mm x2
- 19 mm

Chainring Nut Wrench

Crank/BB tool
Hollowtech 2 bottom bracket tool (68mm bsa) and Preload key

Pliers

Grease
Grease sensitive parts (metal on metal).
Look out for the grease icon which will appear throughout the manual.

(!) = Important / pay attention!
Note: Only use torque specs if not listed on hardware.
Some steps contain links to full manuals in the bottom of the page.

1.0 If you watch the Assembly Video you can pay attention to these numbers, that shows you how it should be done.

Go to the Assembly Video here

*King Harry says:
Don't worry!
I'll walk you through this!!*

(!)
To avoid scratches to frame, leave as much wrapping on until you need to remove it!

Checklist Use this checklist while assembling the Bullitt!

CUSTOMER: _____   FRAME: WLH _____   MODEL: _____

Front Fork

1
- ○ Grease bearing cups, races and threads
- ○ Adjust Headset with top cap cone (19mm)
- ○ Tighten the 5mm hex expander bolt (3-4Nm)

Steering Rod & Easy-Up

2
- ○ Grease bearing cups and races
- ○ Bolt Easy-Up clamp 2x (4mm) (5-6Nm)
- ○ Adjust Headset, lock bolt (3mm) (3Nm)
- ○ Tighten QR
- ○ Check that the Easy-Up moves freely

Dropouts

3
- ○ Grease mounting surface on frame
- ○ Tighten 6x bolts (5mm) (14-17Nm)

Mudguards & Front Reflector

4
- ○ Front Mudguard: Grease bolts, install (3Nm) and re-adjust tire gap after wheel is on and inflated
- ○ Rear Mudguard: Grease bolts, install (3Nm) and re-adjust tire gap after wheel is on and inflated
- ○ Mount Front Reflector

Front Wheel

5
- ○ Check rotor bolts (4Nm) and Centerlock
- ○ Grease splines and tighten (40Nm)
- ○ Mount QR with grease and tighten
- ○ Inflate tire
- ○ Adjust Mudguard tire gap

Rear Wheel

5
- ○ Check rotor bolts (4Nm) and centerlock
- ○ Grease splines and tighten (40Nm)
- ○ Check cassette lockring (40Nm)
- ○ Mount axle nuts with grease (30-45Nm) / QR
- ○ Inflate tire
- ○ Adjust Mudguard tire gap

Steering Arm

6
- ○ Grease and bolt ball joint to fork (13mm) (11-14Nm)
- ○ 2x (5mm) clamp bolts (7-9Nm) to Steering Rod
- ○ Tighten 2x (17mm) (15-18Nm) nuts with star washers, check ball joint angle
- ○ Adjust Steering Arm clamp 2x (4mm) (6-7Nm) so the tire doesn't rub arm or oversteer
- ○ Adjust alignment between the handlebar and front wheel so the bike rides straight

Bottom Bracket

7
- ○ Check BB for damaged threads, paint, etc.
- ○ Install BB with grease and tighten (35-50Nm)

Mount Crankset

7
- ○ Install Crank, adjust preload (0,7-1,5Nm)
- ○ Push in stopper plate and tighten crank arm bolts (12-14Nm)

Pedals

8
- ○ Grease threads, install and tighten (40Nm)

Chain or Gates Carbon Drive

9
- ○ Install Chain, check length and quick link
- ○ Install Belt, tension and align to specification
- ○ Frame Block: Tighten 2x 5mm hex bolts (14-17Nm)

Handlebar & Stem

10
- ○ Stem bolts 2x 4mm (6Nm)
- ○ Handlebar bolts 4x 4mm (6Nm)
- ○ Check brake (3-4Nm) & shift lever clamps (3Nm)
- ○ Check grips (3-3,5Nm) and bell screws (0,4-0,5Nm)

Front & Rear Brake

10
- ○ Mount Front Disc Brake and center caliper (6Nm)
- ○ Mount Rear Disc Brake (6Nm) and center caliper OR bolt brake arm to dropout (Nexus)

External Gears (depending on Model)

10
- ○ Mount Front Derailleur plate with sliding nut behind bracket with grease 1x 4 or 5mm hex bolt (3-4Nm)
- ○ Tighten 5x 2.5mm hex bolts (3-4Nm)
- ○ Mount Front Derailleur and adjust height
- ○ Mount Rear Derailleur with grease (8-10Nm)
- ○ Check all limits and adjust shifting cables

Internal Gears (depending on Model)

10
- ○ Route shift cable properly & adjust gears

Saddle, Seatpost & Rear Reflector

11
- ○ Grease seat tube and insert Seatpost, adjust and tighten QR clamp
- ○ Mount Rear Reflector to Seatpost
- ○ Check Saddle angle and tighten bolts (3Nm)

Kickstand

12
- ○ Check Kickstand bolts 2x (23-27Nm)
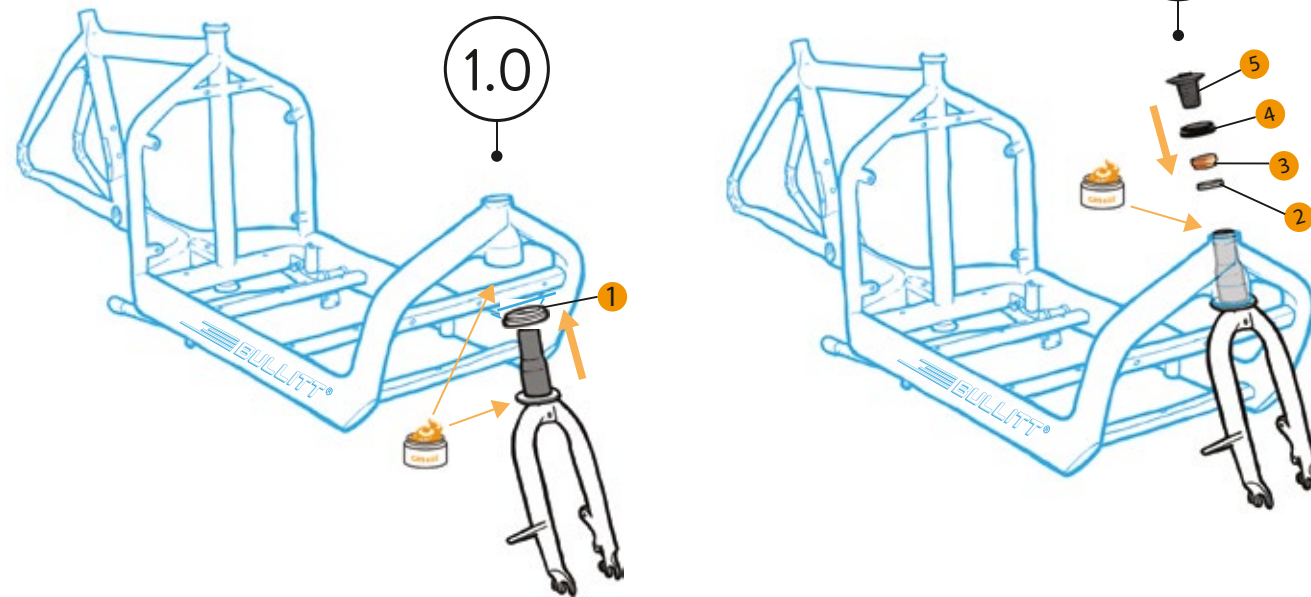- ○ Tighten bumpers (Phillips)
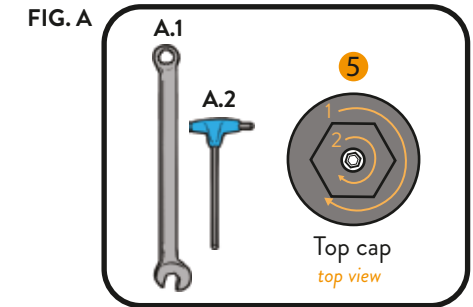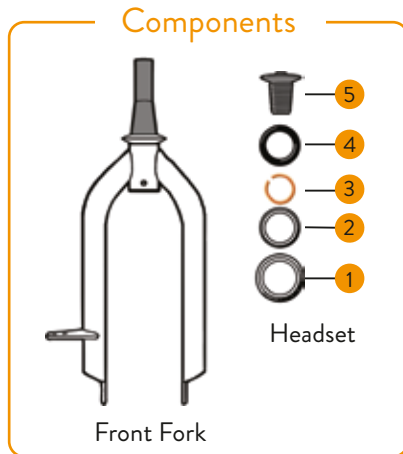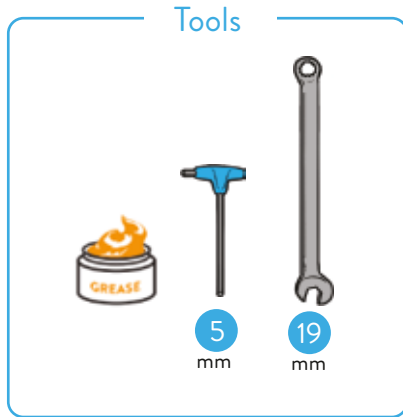
Testride!

13
- ○ Check ALL clamp bolts before test ride!
- ○ Check for rattles
- ○ Check steering alignment
- ○ Check brake and gear adjustment

ASSEMBLED / TESTED BY:

_____
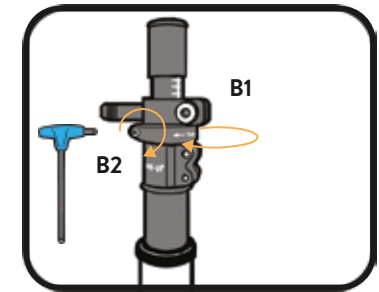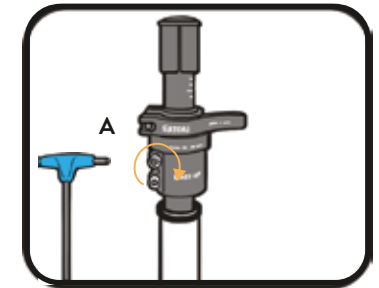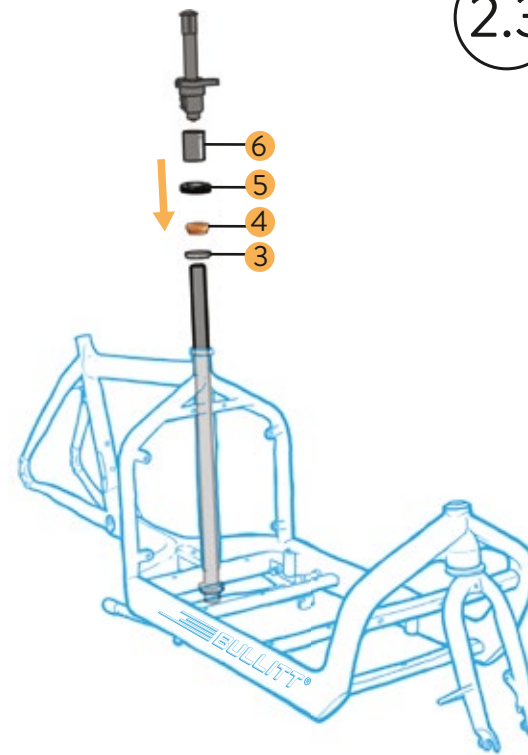
Notes:

_____

Step 1 Installing Front Fork & Headset

Tools

GREASE

5 mm 19 mm

Components

5
4
3
2
1

Headset

Front Fork

Be sure the cone shaped expander in the top cap is released 3-5 mm before installation

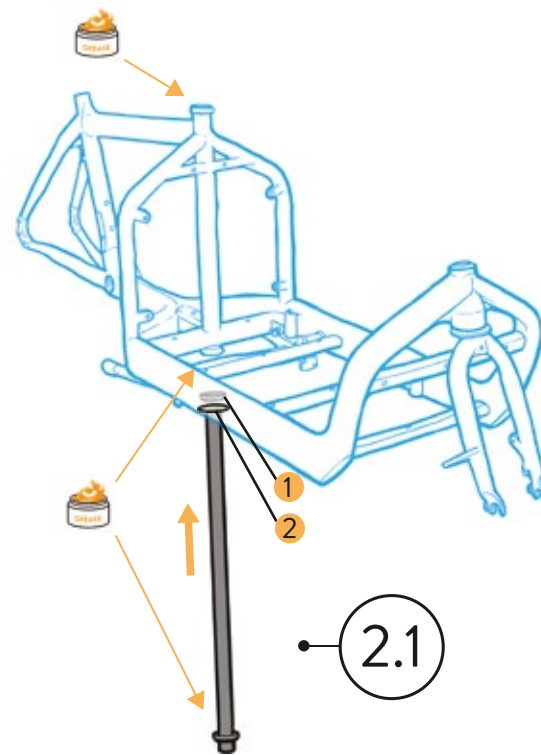**FIG. A**

A.1
A.2
5

Top cap
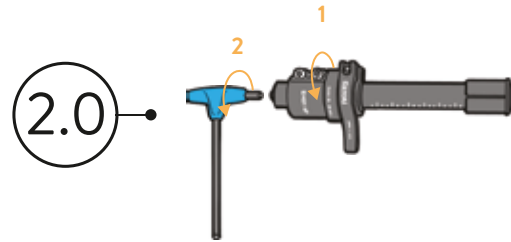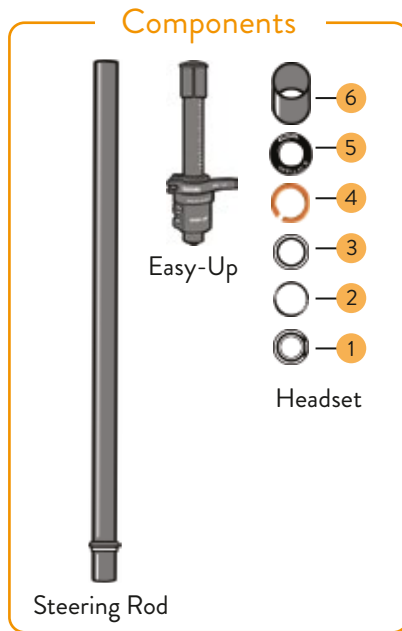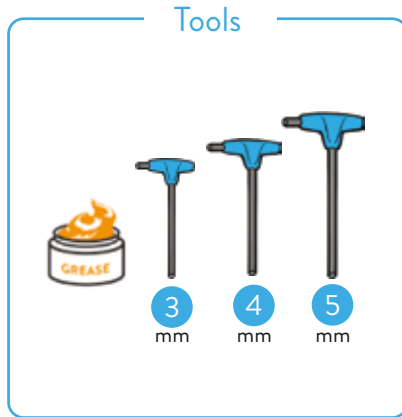*top view*

1.0

1

1.1

5
4
3
2

Apply grease to the bearing cups, the crown race and internal threads of the fork.

1.0 Drop the lower bearing **1** on the crown race of the fork with the angle facing up. Slide the fork through the head tube. Place the upper bearing **2** into the top cup with angle facing down.

1.1 Place the compression ring **3** and top cover **4** in the correct order.
Thread the top cap **5** into the steer tube of the fork carefully with your fingers so you don't cross the threads!

Tighten top cap to adjust the headset bearing tension (3-4 Nm) with a chamferless 6 point 19mm socket or 19mm cone wrench **(FIG. A.1)**
Tighten the 5mm hex bolt (3 - 4Nm) in the top cap to lock the threads into place **(FIG. A.2)**

Step 2 Installing Steering Rod, Headset and Easy-Up

Tools

GREASE

3 mm
4 mm
5 mm

Components

Easy-Up

Steering Rod

6
5
4
3
2
1

Headset

2.0

1
2

2.1

2.2

6
5
4
3

2.3

A

B1
B2

2.0 → Loosen the headset adjustment ring on the Easy-Up **(1)** and tighten the adapter sleeve bolt (in the bottom) with 5mm hex (6Nm) **(2)**

Apply grease to bearing cups and crown race.

2.1 → **Install Bearings and Steering Rod:** Place lower bearing into the lower cup **1** and snap the dust seal in properly. Slide Steering Rod through frame from below and support the bottom of it (so it doesn't fall out). **2**

2.2 → Drop upper bearing into the top cup **3**, place compression ring **4** and top cover **5** in the correct order, followed by the spacer **6**

2.3 → Place the Easy-Up all the way into the Steering Rod (by tapping it downward gently) and tighten 2x4mm hex clamp bolts (5-6 Nm) (**A**)
Tighten the headset bearings with the adjustment ring by turning clockwise by hand. (**B1**)
Secure the adjustment ring by tightening the 3mm hex fixing bolt. (3 Nm) (**B2**).
Tighten Quick Release (QR) clamp.

Step 3 Mounting Dropouts

Tools

- GREASE
- 5 mm
- Chainring Nut Wrench

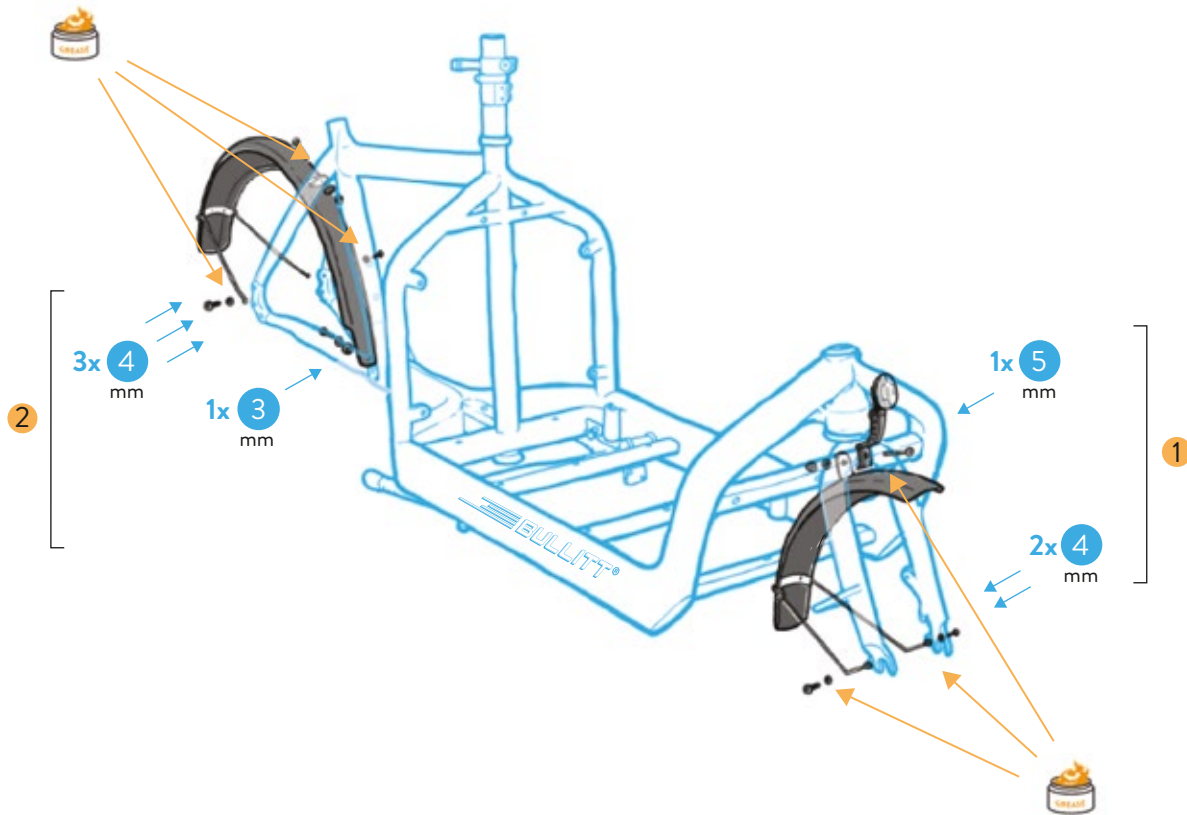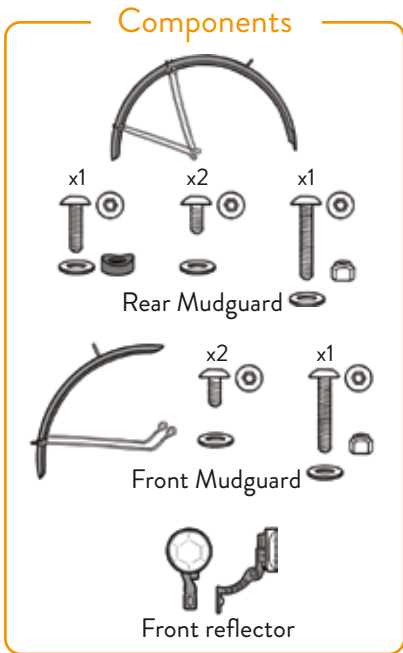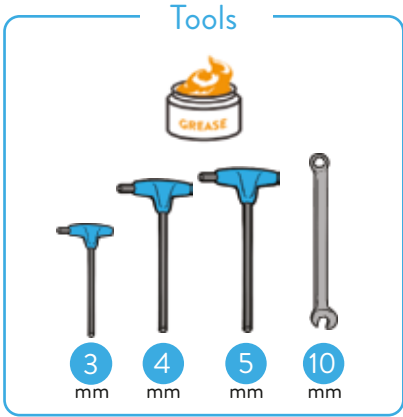## Components

- L / R — Drop outs

FIG. A

3.0
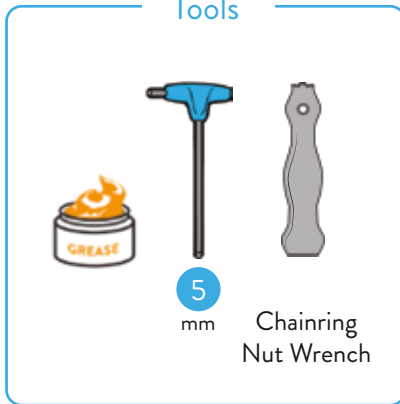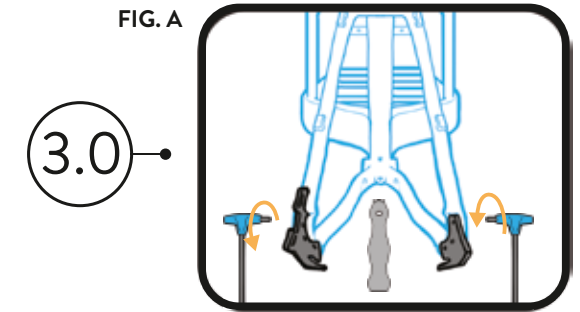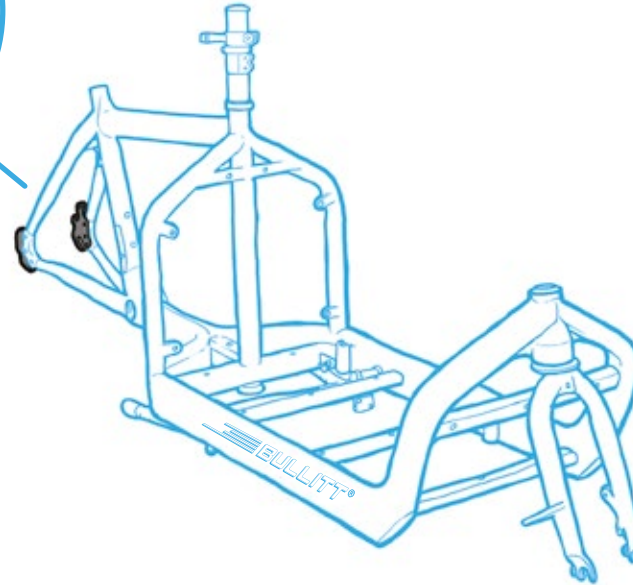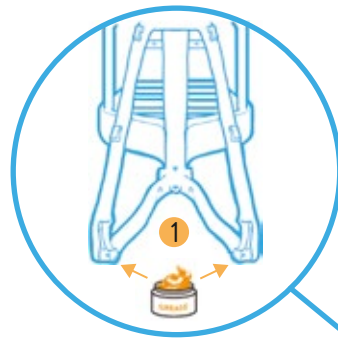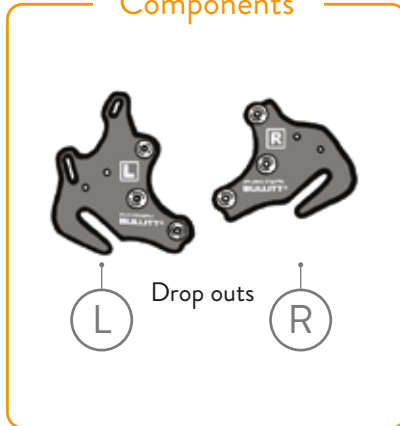
Grease mounting surface on frame **1**

3.0 → Tighten hex bolts 3x 5mm from the outside of the frame and hold the nuts in place with the Chainring Nut Wrench, torque to (14-17 Nm) **(FIG. A)**

Step 4 Installing Mudguards & Front Reflector

(4.0)

Tools

- 3 mm
- 4 mm
- 5 mm
- 10 mm

Components

x1 x2 x1
Rear Mudguard

x2 x1
Front Mudguard

Front reflector

2

3x 4 mm

1x 3 mm

1x 5 mm

2x 4 mm

1

BULLITT®
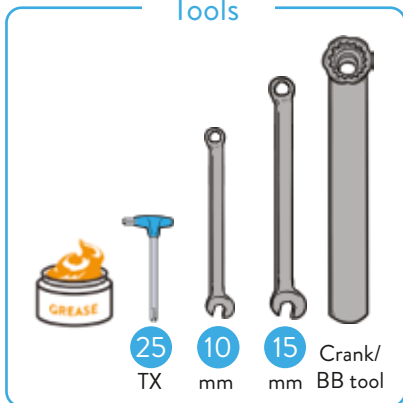

Grease bolts.

(4.0)→ Install Front Mudguard (3 Nm) and Front Reflector ❶

Install Rear Mudguard (3 Nm) ❷

If installing Gates Belt, leave the Rear Stays unmounted
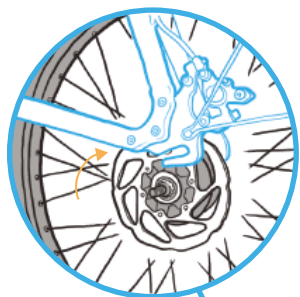until after the Gates installation.
Re-adjust tire gap after wheel is on and inflated.

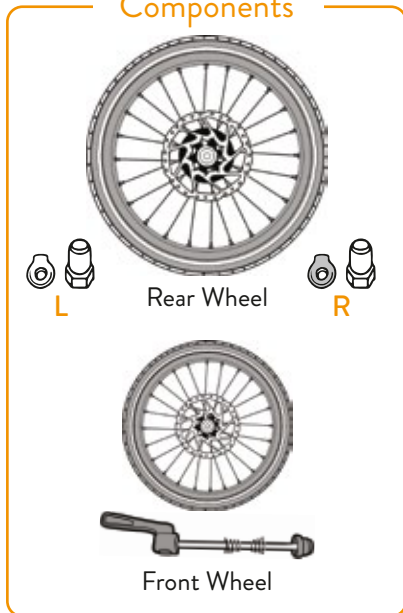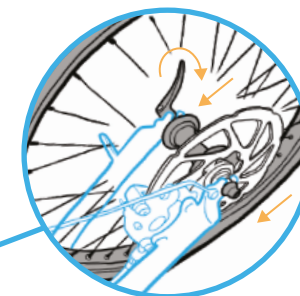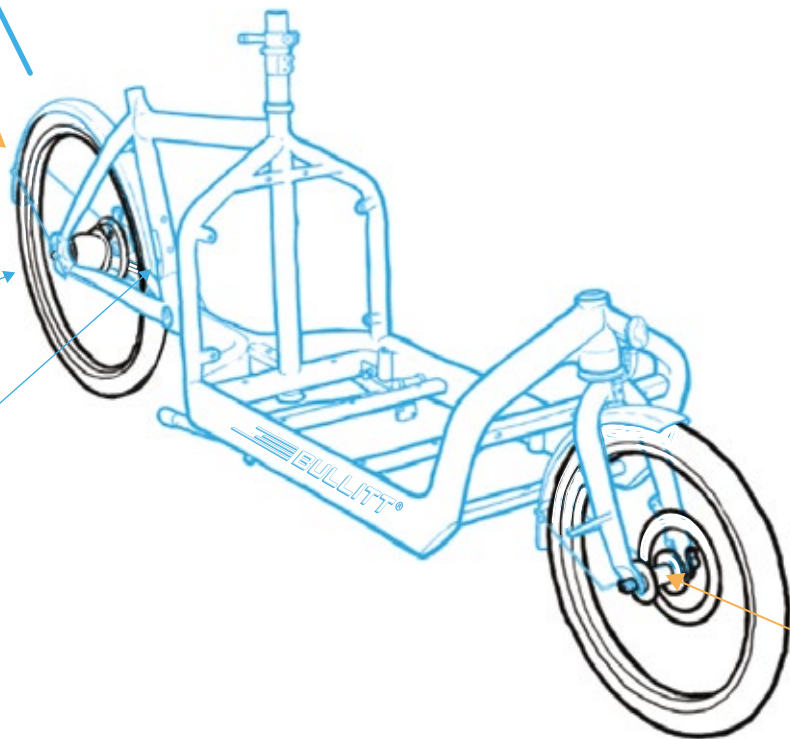# Step 5 Mount Wheels

5.0

Tools

25 TX
10 mm
15 mm
Crank/ BB tool

Components

Rear Wheel
L   R

Front Wheel

2x
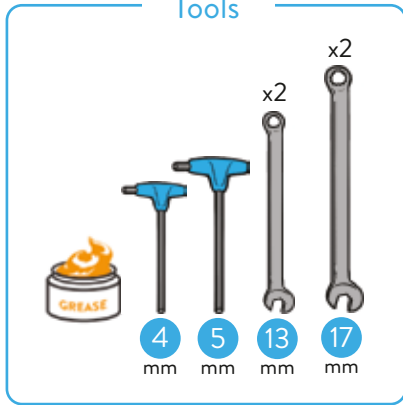15 mm

10 mm
(Only needed for pedal brake)

BULLITT®

Grease axels and centerlock rotor splines.

5.0 → Check rotor centerlock (40 Nm) and rotor bolts T25
(4 Nm), cassette lockring (40 Nm) and spoke tension.
For wheels with nuts, tighten (30-45 Nm).
Wheels with QR, make sure lever is fully secure.
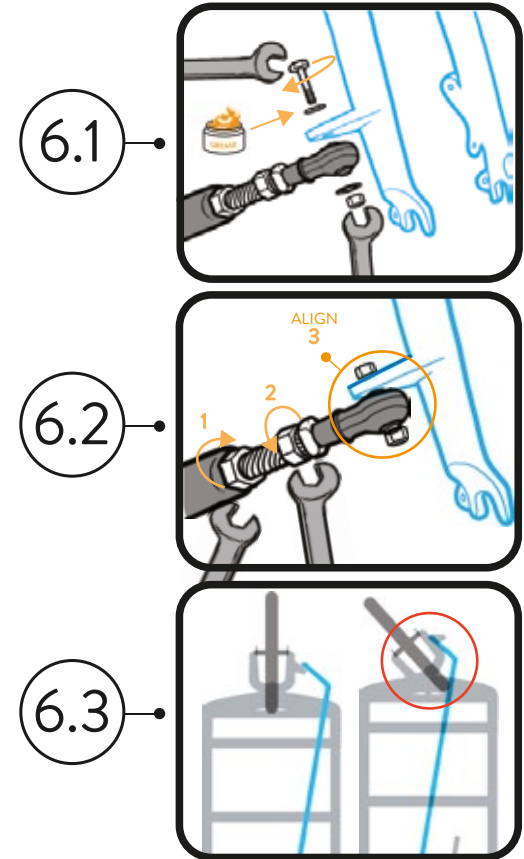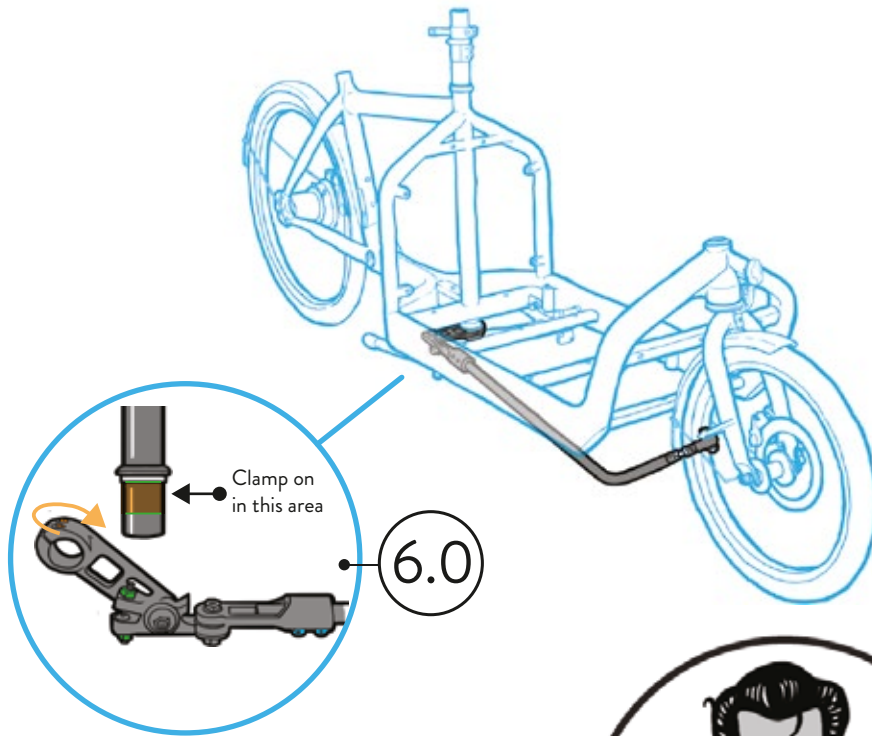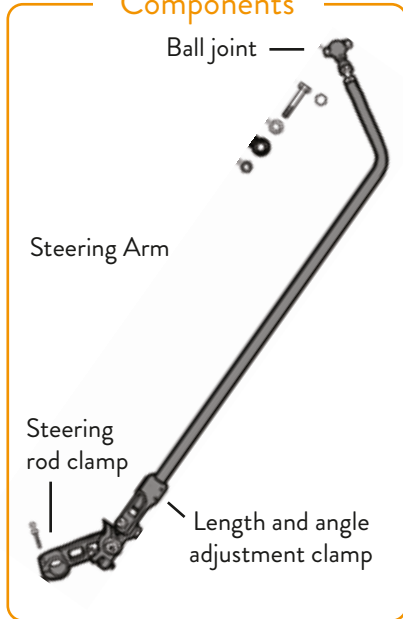Inflate tires and adjust Mudguards.

Remember if installing Gates Belt: Wait with installation
of Rear Mudguard Stays untill Gates Belt is installed.
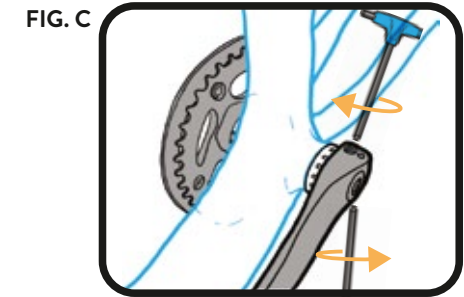
Step 6 Mount Steering Arm

Tools

x2
x2

4 mm
5 mm
13 mm
17 mm

GREASE

Components

Ball joint

Steering Arm

Steering rod clamp

Length and angle adjustment clamp

Clamp on in this area

6.0

6.1

ALIGN
3
1
2

6.2

6.3

Be patient and check that the steering arm doesn't contact the corner of the frame (2cm gap).

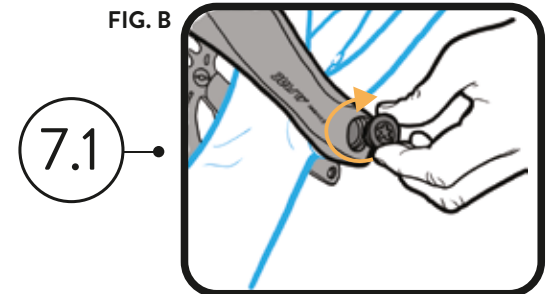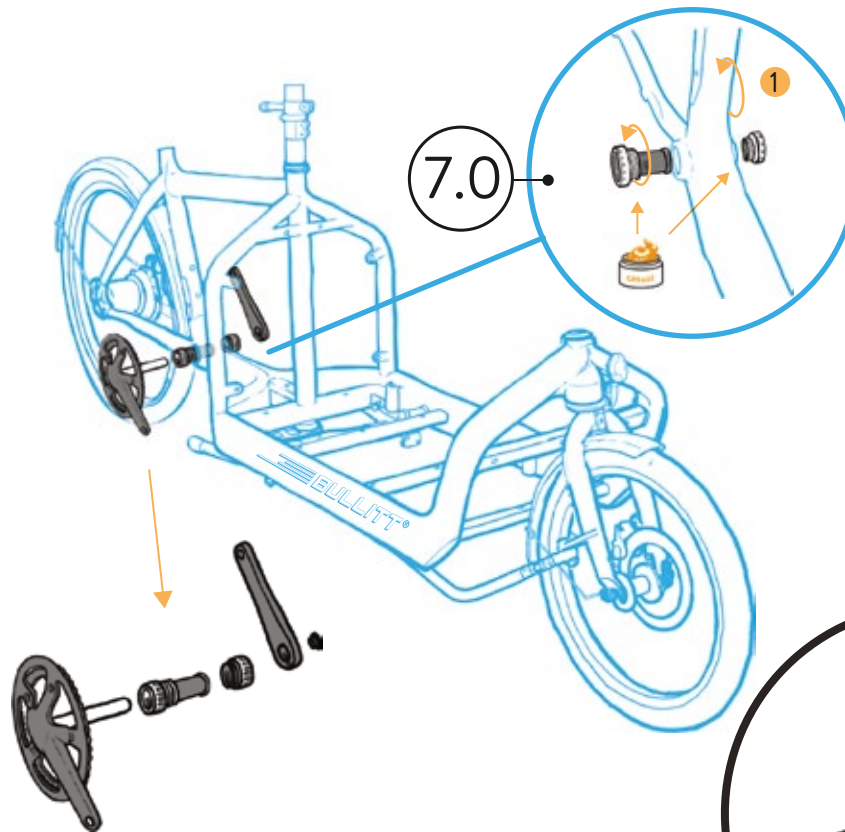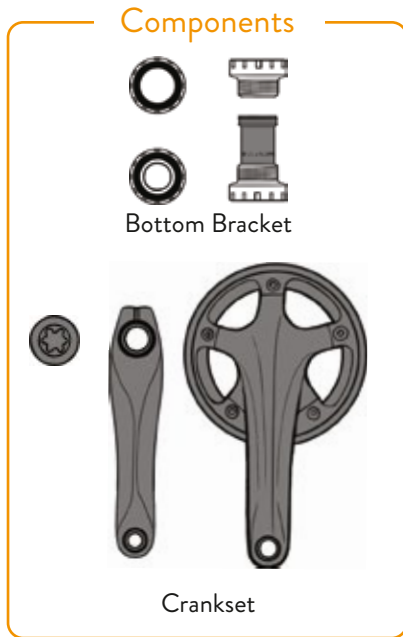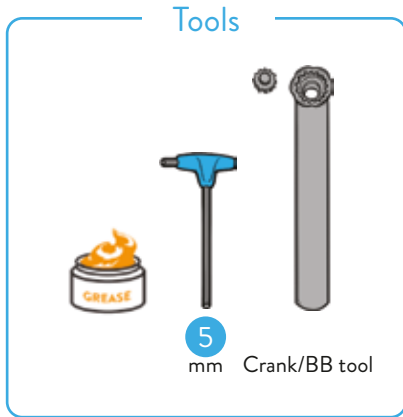**6.0** Attach clamp at the end of steering arm to the steering rod, by sliding the clamp all the way up until it touches the underside of the crown race. Lightly tighten bolts. **(FIG. A)** (Later tighten completely to adjust the alignment between handlebar and front wheel).
Torque the clamp to the steering rod 2x 5mm (7-9Nm).

6.1 Bolt the ball joint underneath the fork tab (11-14Nm).

Grease the bolt and make sure the washers and shims are in the correct order.

6.2 Tighten the 17mm nuts at the ball joint, starting with the rear one **(6.2.1)**, repeat for the front (15-18 Nm) or until star washers are locked **(6.2.2)**
Align ball joint to fork tab, so it moves smoothly through the steering cycle (without unlocking star washers) **(6.2.3)**

6.3 Adjust Steering Rod length and angle at the clamp with 2x 4mm hex bolts (so the tire doesn't rub arm or oversteer when handlebar is turned all the way left or right)
Tighten bolts (5Nm). Adjust alignment between handlebar and front wheel so the bike rides straight.
Fully torque the steering arm clamp to the steering rod 2x 5mm hex bolts (7-9Nm).

Step 7 Install Bottom Bracket & Crankset

Tools

GREASE

5 mm Crank/BB tool

Components

Bottom Bracket

Crankset

7.0

7.1

FIG. B

FIG. C

1

⚠
Before you begin, inspect frame to check bottom bracket for damaged threads/paint, etc. If needed, use the correct amount of BB Spacers corresponding to your specific crank

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Install Bottom Bracket:
Thoroughly grease threads.

7.0 → Turn each cup in with your fingers, make sure they are on their corresponding side and started correctly so you don't cross the threads!
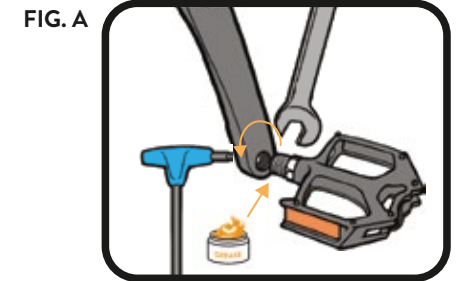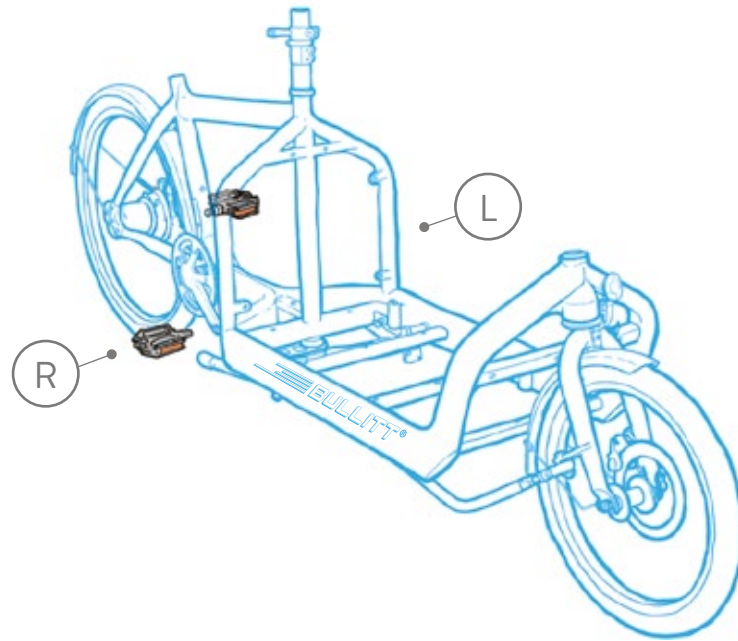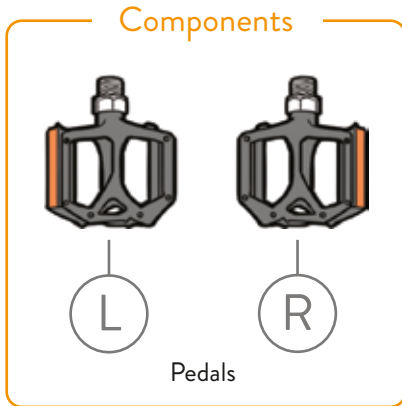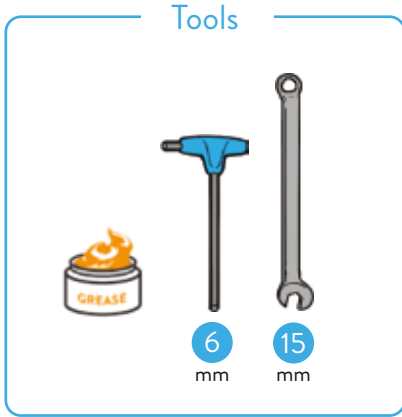
Drive side (right side) tighten counter-clockwise. Non-drive side (left side) tighten clockwise. **1** Use BB-tool to fully torque (35-50 Nm).

7.1 → **Mount the Crankset:** Start with right crank arm, (the one with chainring and axle attached), slide axle through Bottom Bracket and attach left crank arm to it, tightening the plastic fastening bolt with the preload-key (0.7-1.5Nm) **(FIG. B)**
Push in the stopper plate and tighten the x2 (5mm) hex-bolts (12-14 Nm) **(FIG. C)**
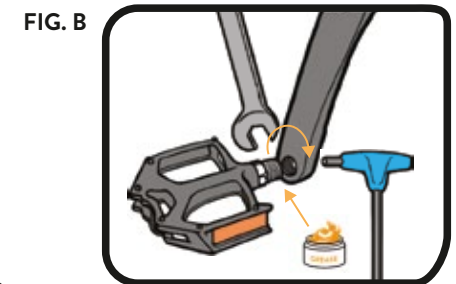
See the full Bracket and Crankset manual from Shimano here

Step 8 Mount Pedals

8.0

L Non-driveside tightens counter-clockwise

R Driveside tightens clockwise

Tools

GREASE

6 mm   15 mm

Components

L   R

Pedals

L

R

(!)

Remember to put grease on the pedal threads. The pedals is marked with L or R so you know which side they fit. Do not force the pedals into the crank arms!

To mount the Pedals, thoroughly grease the threads and start by turning each pedal in with your fingers, making sure they are on their corresponding side and started correctly so you don't cross the threads!

Afterwards torque to (40 Nm) with pedal wrench or 6mm hex. **(FIG. A & B)**

Step 9 Install Gates Belt or Chain
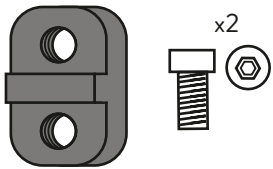## Check or install Gates Frame Block

9.0

Tools
5
mm

Components
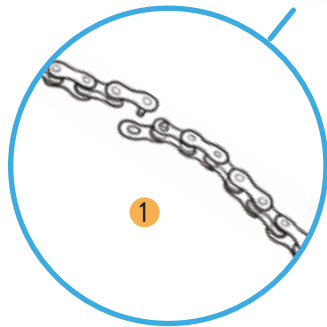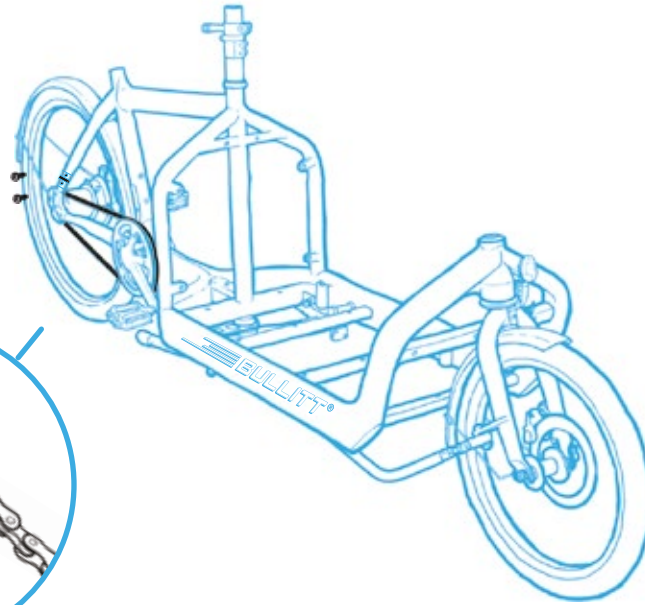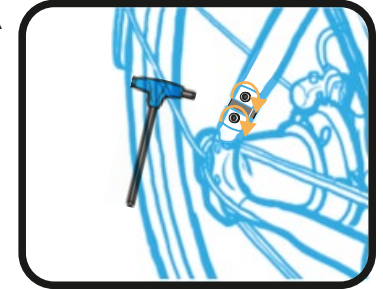
Chain or Gates Belt

x2

Gates Frame Block

1

Make sure to
check/tighten bolts even/also
when using chain.

Chain
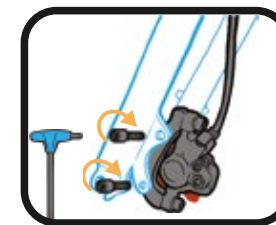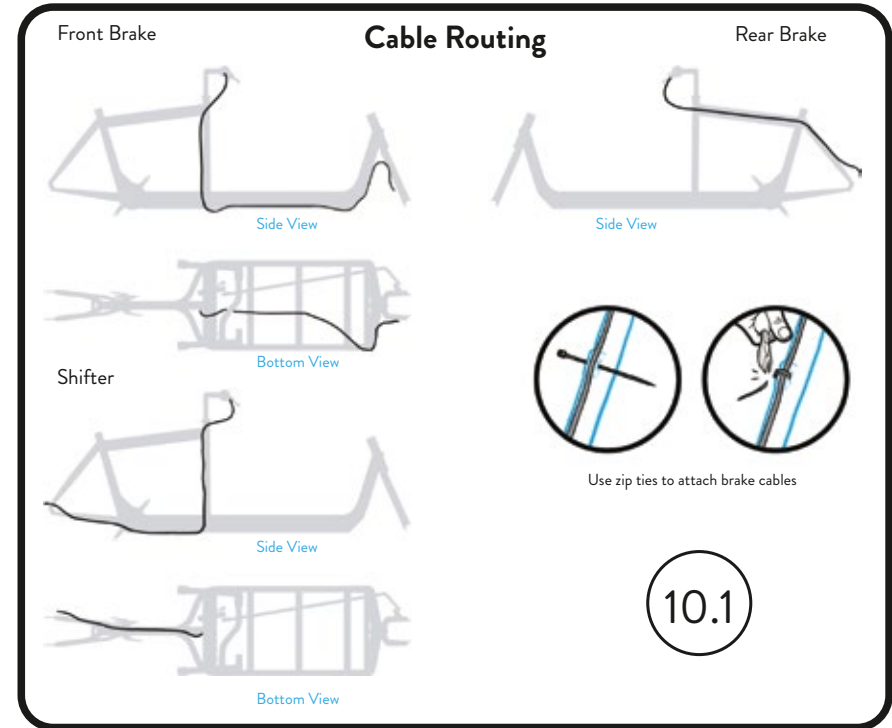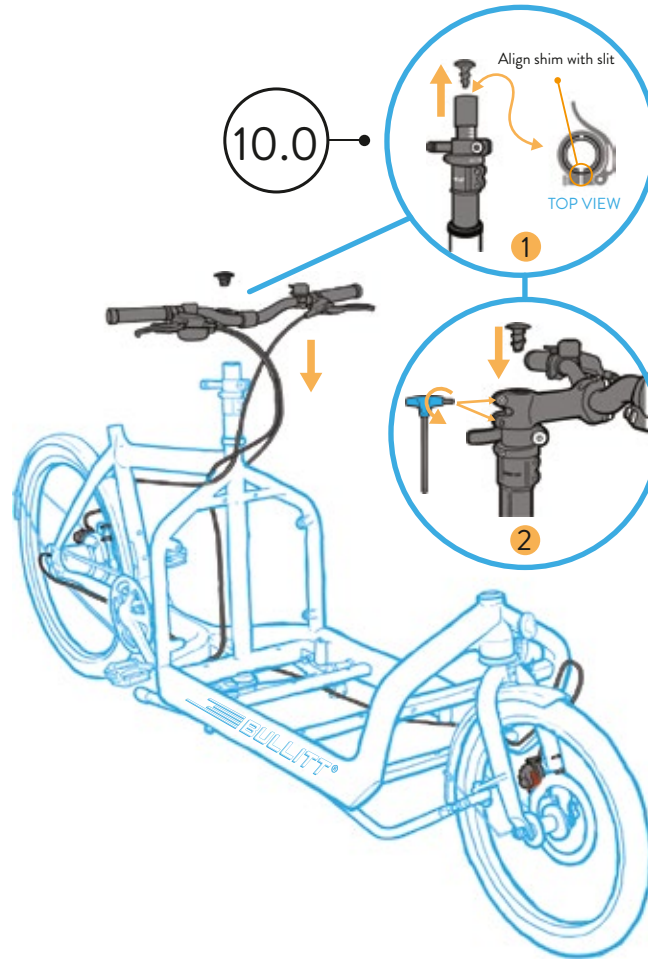Install Chain, check length and quick link. 1
To adjust tension, use adjuster screws on Dropouts.
Check Gates Frame Block 2x 5mm hex bolts. (14 -
17Nm) **(FIG. A)**

Gates Belt
Remove frame block to slip belt into rear triangle.
Install belt, tension and alignment to Gates Carbon Drive
Specification. See the full manual from Gates here
Mount frame block 2x 5mm hex bolts. (14 - 17Nm) **(FIG. A)**
To adjust tension, use adjuster screws on Dropouts.

Step 10 Mount Cockpit, Brakes, Shifter Cable and -routing

Tools

25 TX
4 mm
5 mm
Pliers

Components

Handlebar
Stem
Brakes
Shifter Cable
Bell

10.0

Align shim with slit

TOP VIEW

1

2

Cable Routing

Front Brake

Side View

Bottom View

Shifter

Side View

Bottom View

Rear Brake

Side View

Use zip ties to attach brake cables

10.1

FIG. A

FIG. B

10.2

Align in 4th. gear

FIG. C
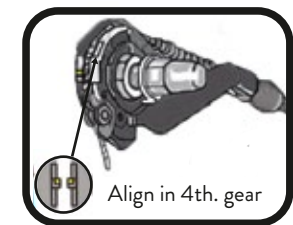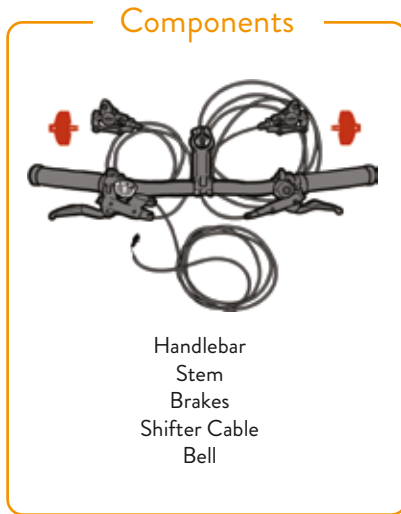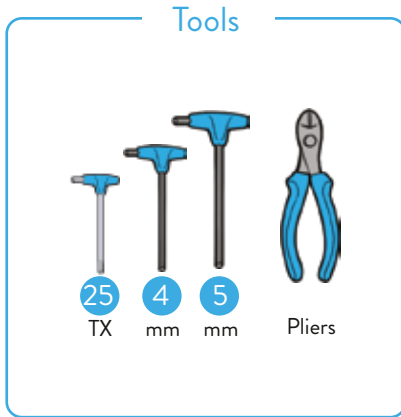
10.3

10.0 → Mount Cockpit: Take off rubber top cap/plug, mount stem with the shim aligned so it is level with the top of the stem ①. Tighten bolts 2x4mm (6 Nm) and install rubber top cap/plug again ②.

10.1 → Cable routing: Start at handlebar, cross the hoses/cables in a way that looks clean and functions when Easy-Up is raised. Rear Brake and Shift Cable comes from the right side of handlebar and Front Brake Cable from left.

Mount cables loosely with zip ties, tighten zip ties when calipers are mounted and brake hoses are not kinked! **(See Cable Routing)**

10.2 → Mount Brake Calipers: Tighten adapter bolts (6-8 Nm). Center brake calipers and tighten caliper bolts (6 Nm) **(FIG. A & B)**

10.3 → Install Shift Cable: Shift to lowest or highest gear on shifter (cable fully released). Bring cable around to cassette joint pulley, (inner cable fixing nut facing

outside toward the fork end), and slide the flat part of the inner cable fixing washer into gap in the pulley. Pass inner cable through slit in cassette joint bracket, insert end of outer casing securely into outer casing holder. The two yellow marks should be aligned in 4th gear on Alfine 8. Use barrel adjuster on shifter to fine adjust the gears with fingers. **(FIG. C)**

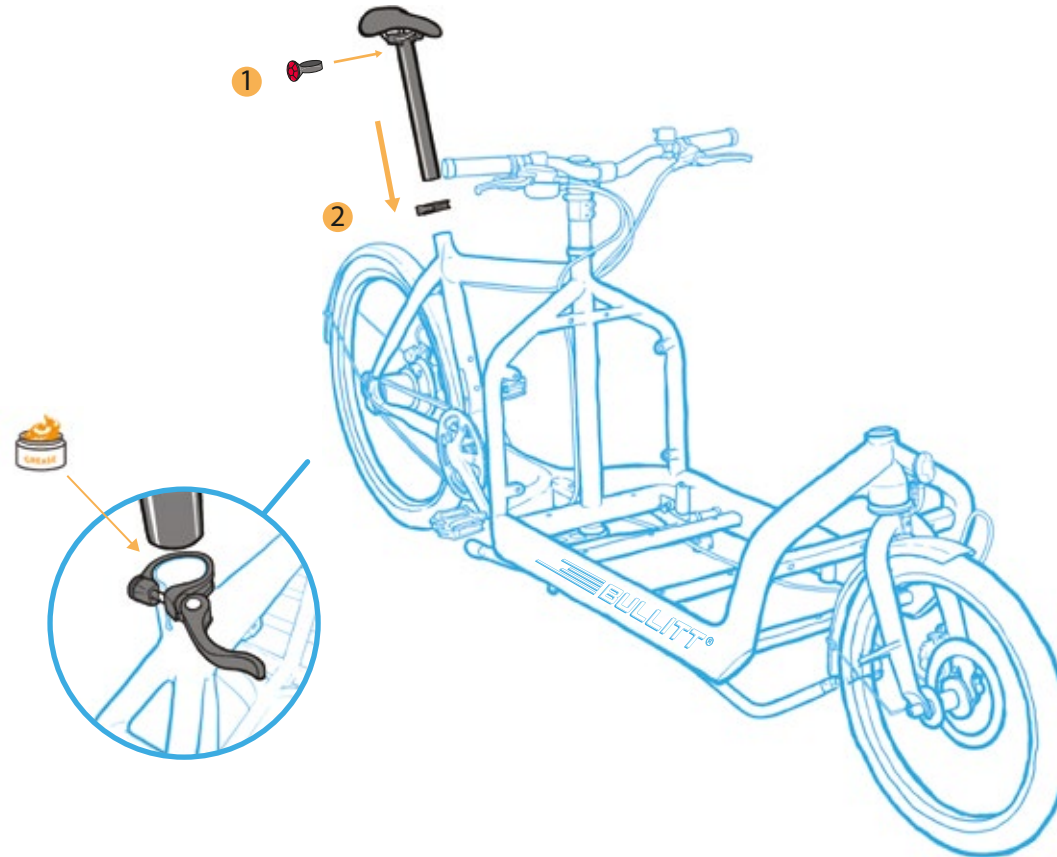# Step 11 Mount Seatpost, Clamp and Rear Reflector

11.0

Tools

5 mm

Phillips

Components

Saddle, Seatpost, QR Clamp
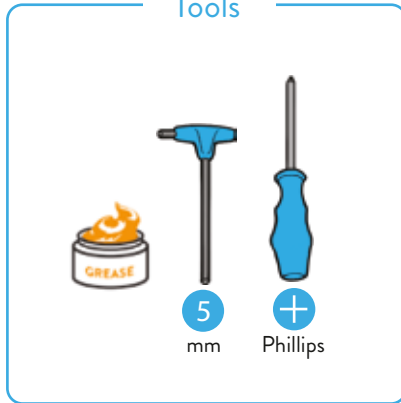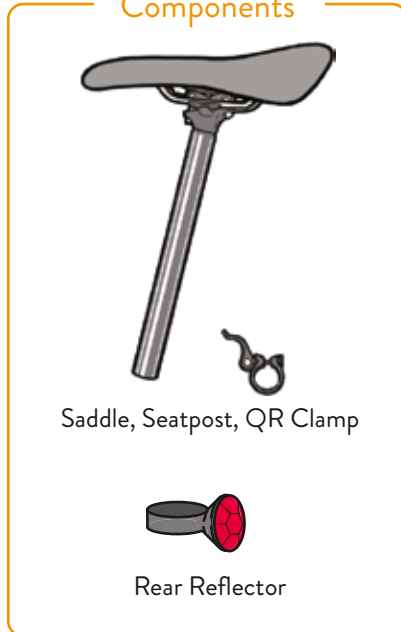
Rear Reflector

11.0 → Mount Rear Reflector to seatpost towards the upper portion of the seatpost so that it can be lowered all the way without interference.

Grease seat tube

Insert seatpost to minimum insert line. Adjust and tighten QR Clamp.
Check saddle angle and tighten bolts 2x 5mm to (3Nm)

Step 12 Install Kickstand on **RÅ**

Check bumpers on all Bullitts

8 mm

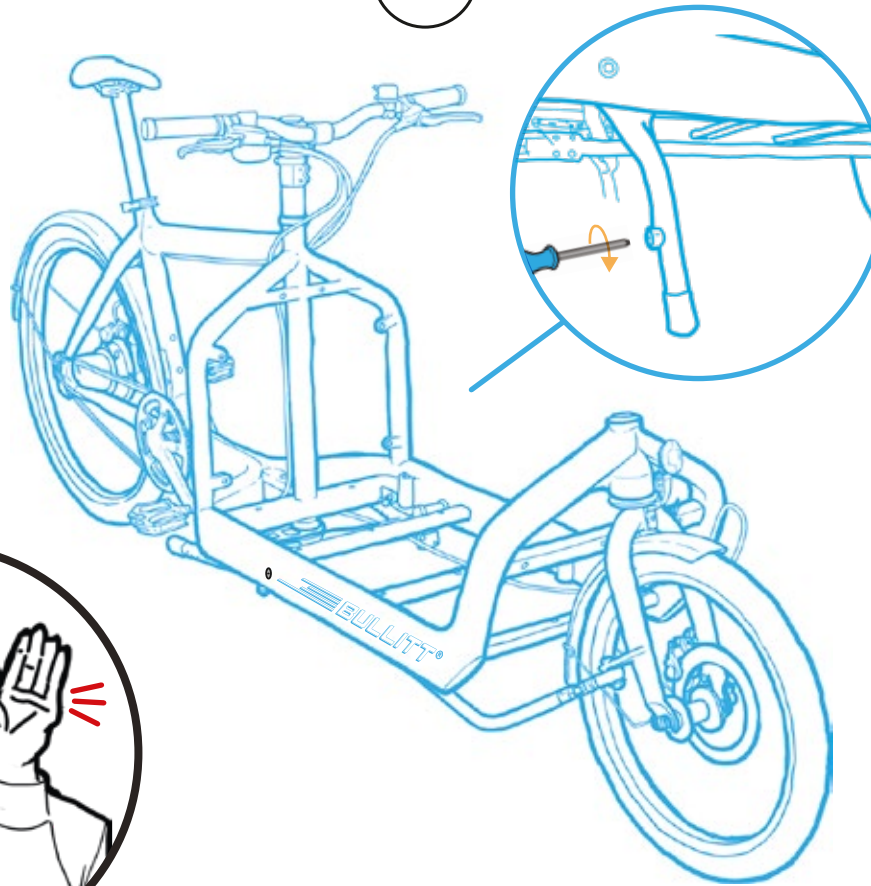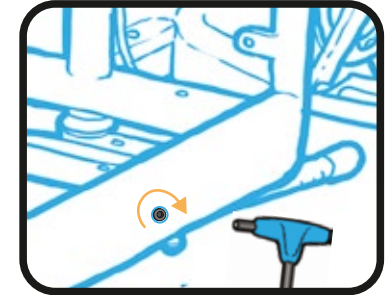+ Phillips

12.0

FIG. A

⚠️
When you check the bumpers, listen to the sound of the Kickstand hitting the frame: This should sound like the doors of a Ferrari!

12.0 → **Check bumpers on Kickstand on ALL Bullitts:**
Tighten 2x bumpers (Phillips). Make sure to listen to the sound of the Kickstand when it hits the frame. This should not sound hollow.
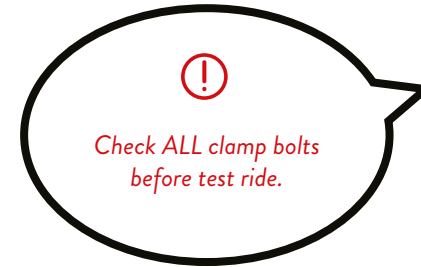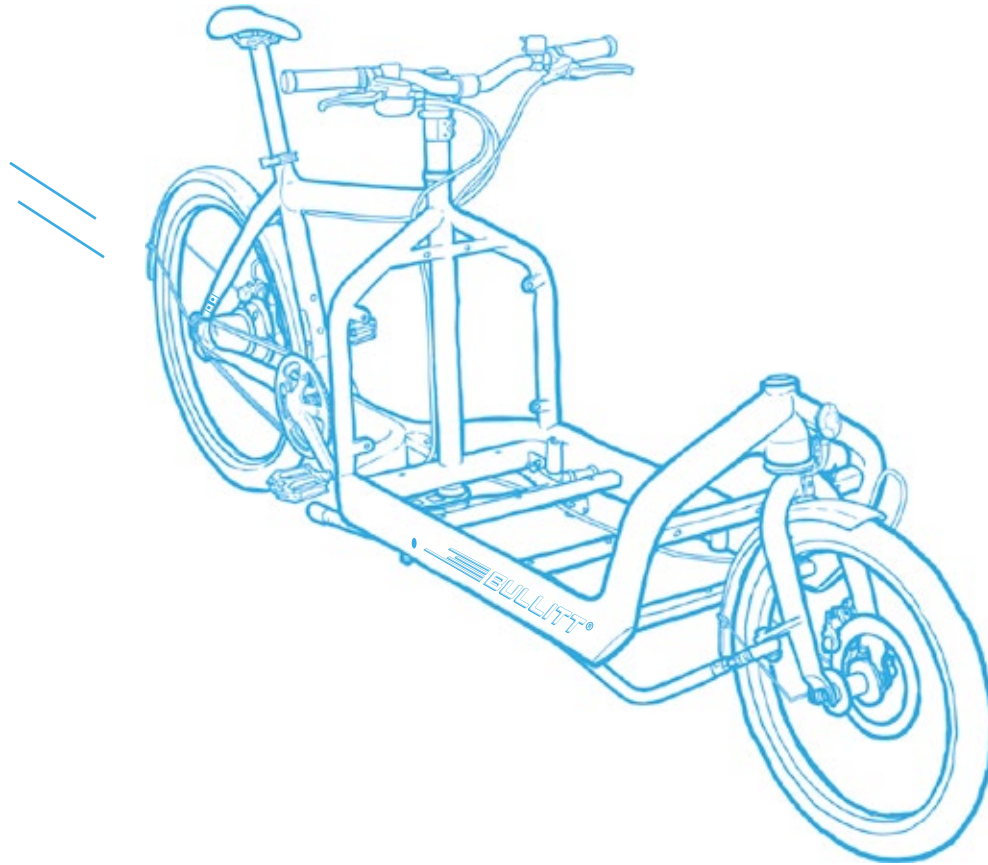
Installing Kickstand on RÅ:
Set Kickstand in place, start 8mm bolt by hand.
Torque Kickstand bolts 2x 8mm to (23-27 Nm)
to each side of the frame. Be careful not to scratch the frame! **(FIG. A)**
Finish by tightening 2x bumpers (Phillips)

Step 13 Test Ride!

(13.0)

> (!) *Check ALL clamp bolts before test ride.*

(13.0)→ Before you go on that sweet test ride - Check for rattles, steering alignment, brake and gear adjustment.

And now... you are ready to test your Bullitt!
We hope you'll enjoy the ride and take care out there!