

PAWS

SERVICE MANUAL



REHASENSE



City, Cruiser and Tourer Series



City 12"/14"



Cruiser 16"



Tourer 20"

Attention: This manual is to be used in conjunction with "PAWS User Manual" and does not exclude maintenance and service information contained therein.

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1. MAINTENANCE PARTS AND SCHEDULE

No.	Parts name	Control type Device	Control frequency
1	Battery and Charger	Ensure contact points are clean on the battery and its housing by wiping with a dry cloth. Also check that the plug and battery socket for charging are clear of any dirt or metal particles	Whenever recharging the battery
2	Brake Levers	Brake cables may stretch over time. These can be adjusted by loosening the lock nut and turning the adjustor next to the brake lever housing. Retighten after adjusting	As indicated through use
3	Handlebars	Check tightness of all fasteners on the handles bars to ensure stability of parts. Only use the tools supplied	Depending on use, and/or monthly
4	Lights and Horn	Normal function check	Before driving each time
5	Disc Brake Assembly	Clean dirt off the Brake Disc and check for excessive wear such as gouging or deep grooves	Whenever the braking performance feels diminished or monthly
6	Clamping Mechanism to Chair Frame	Check adjustments if slipping or excessive markings on the tube are noticed or manual clamping becomes harder or easier than when first delivered	As indicated
7	Clamping Mechanism to Device Frame	Check the tension and adjust to ensure a firm grip on the Width Adjusting Rods. Common to both Chair and Device	As indicated, especially when changing to different chairs
8	Pneumatic Tyres	Tyre pressure (check manufacturers specifications), condition of tread and tyres. One should take care, to keep the pressure in all tyres on the same level. Harder tyres provide better maneuverability and easiness of driving but reduce comfort on bumpy surfaces	At least once a week; see manufacturers "Specifications"
9	Spokes	Loose spokes can cause deformation of the rear wheels. Contact your dealer or local bicycle service to manage the problem of loose spokes	If the problem occurs

TOOL LIST OVERVIEW

No.	Name	Specification	Qty.
1	Open end wrench	13 mm	1 pc
2	Open end wrench	14 mm	1 pc
3	Open end wrench	21 mm	1 pc
4	Tyre Spoon	200 mm	2 pc
5	Socket head wrench	1 mm to 10 mm	1 set
6	Feeler gauge	for brake adjustment	1 pc
7	Loctite 243	for reassembly	--/--
8	Heat gun	for loosening Loctite's fasteners	1 pc
9	Lubricant	Waterproofing gel or spray. Grease for high friction joints	--/--

2. PROGRAMMED SERVICE

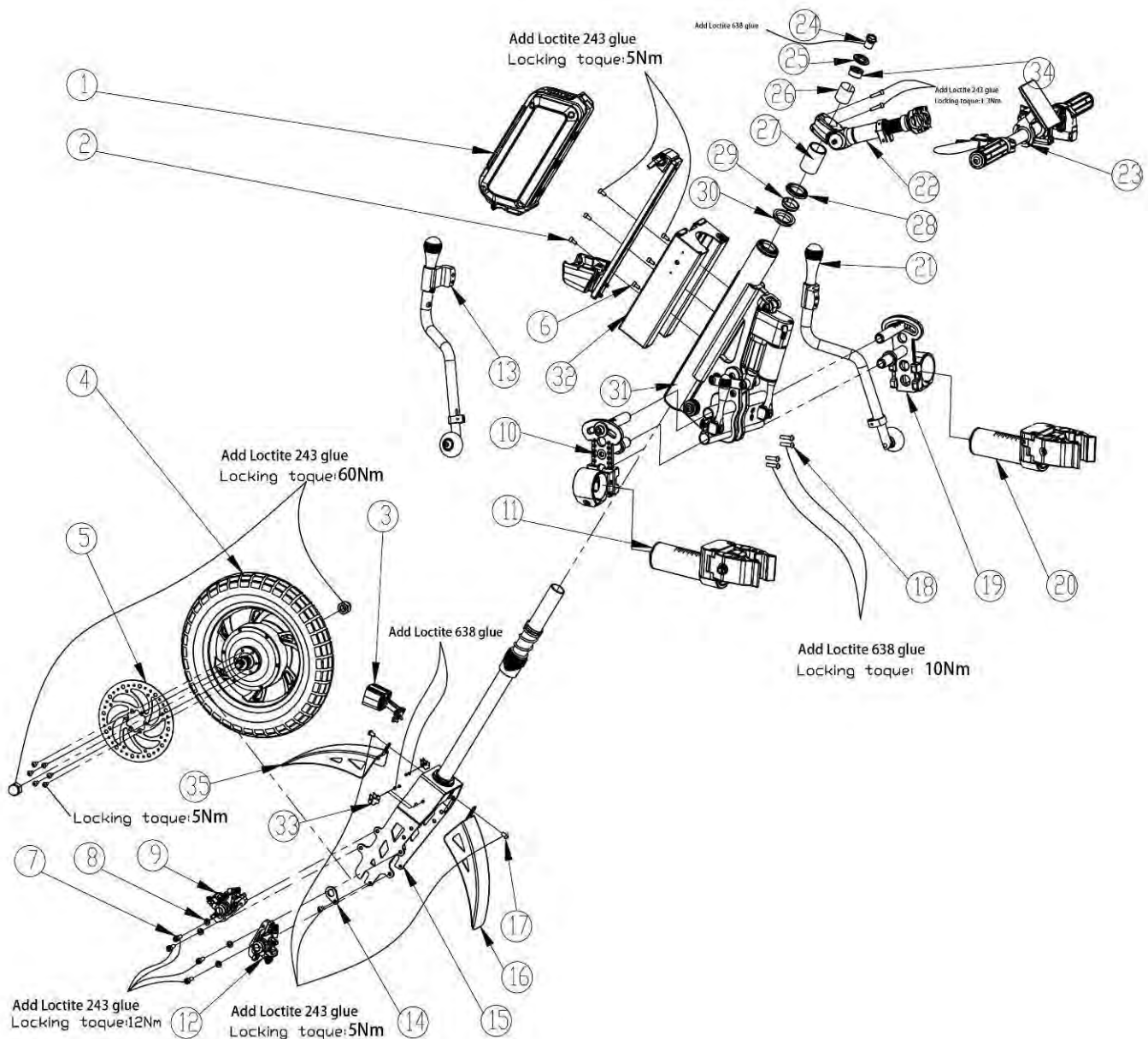
User maintenance and problem solving

Please refer to user manual.

Dealer maintenance and problem solving

- The maintenance of medical products is regulated in each country, for example, Germany by law in the Medical Device Directive (MPBetreibV), Section 7. According to this, maintenance measures, especially inspections and servicing, are required in order to continuous safe and proper operation of medical products.
- General advice on using Loctite 243 glue
 - Loctite 243 glue is added protection against unwanted loosening of nuts and bolts;
 - Gently preheat the fastener with a heat gun to loosen glue – prevents damaging the fastener and makes larger types easier to undo;
 - Clean off old glue before reattaching with fresh glue;
 - Apply a small quantity to the bolt before retightening.
- Based on our market observations, an interval of two years has proven reasonable for maintenance of our products when used under normal operating conditions.
- This guideline value of two years may vary with the product's respective degree of utilization and the behavior of the user.

Exploded Drawing: (PAWS City 12" AAS - RPI12AAS00 as example)



PART LIST: (PAWS CITY 12" AAS - RPII2AAS00 AS EXAMPLE)

No.	Item number	Description	Qty.
1	EBBO048-A	Lithium Battery	1
2	191347	Bolt M5 x 12 mm DIN912	3
3	EBHO65	Head lamp	1
4	EBTOOA	Front wheel 12 inch	1
5	69DOOK	Disc rotor D160 mm	1
6	19119D-A	Bolt M5 x 10 mm DIN912	3
7	1910NO-C	Bolt M6 x 16 mm DIN912	4
8	194034	Spacer D6 4 x D12 x 1.6	4
9	69DOOJ	Disc brake cliper, left	1
10	EBCO41R-BK	Side bracket	1
11	EBDO1A-SI	Automatic clamp, left	1
12	69DOOH	Disc brake cliper, right	1
13	EBLOOS	Support leg, left	1
14	EBFO32	Safety washer	2
15	EBFOOA	Front fork	1
16	EBF102B	Mudguard	1
17	1910MQ	Bolt M6 x 10 mm ISO7380	4
18	191503	Bolt M6 x 25 mm DIN912	4
19	EBCO41L-BK	Side bracket	1
20	EBDO1B-SI	Automatic clamp, right	1
21	EBLOOT	Support leg, right	1
22	EBHOOG	Extension bar	1
23	EBHOOF	Handle bar	1
24	EBFO36	Brake cable bolt	1
25	EBFO35	Brake cable spacer	1
26	EBFO22	Cooper ring	1
27	EBFO41	Bushing D35 x D29 x 50 mm	1
28	EBFO21-4	Head set spacer	1
29	EBFO21-3	Head set ring	1
30	EBFO21-1	Head set bearing	2
31	EBAOOA-BK	Automatic lift system	1
32	EBEOOM-A	Controler box	1
33	EBF110	Bear paw logo	2
34	EBFO34	Cable nut	1
35	EBF102	Mudguard	1

OVERVIEW LIST: (SUB ASSEMBLY PARTS FOR EACH PAWS MODELS)

Head Lamp					
NO.	RPI12MMS00 RPI12MMT00 RPI12AAS00 RPI12AAT00	RPC16MMS00 RPC16AAS00 RPC16AMT00	RPT20MMS00 RPT20AAS00 RPT20AAT00	RPT20MMS01 RPT20AAS01	QTY.
3	EBH065		E BE002		1

Front Wheel assembly					
NO.	RPI12MMS00 RPI12MMT00 RPI12AAS00 RPI12AAT00	RPC16MMS00 RPC16AAS00 RPC16AMT00	RPT20MMS00 RPT20AAS00 RPT20AAT00	RPT20MMS01 RPT20AAS01	QTY.
4	EBT00A	EBT00C	EBT00D	EBT00E	1

Disc brake rotor					
NO.	RPI12MMS00 RPI12MMT00 RPI12AAS00 RPI12AAT00	RPC16MMS00 RPC16AAS00 RPC16AMT00	RPT20MMS00 RPT20AAS00 RPT20AAT00	RPT20MMS01 RPT20AAS01	QTY.
5	69D00K		69D00N		1

Clamp-left said					
NO.	RPI12MMS00 RPI12MMT00 RPT20MMS00	RPC16MMS00 RPT20MMS01	RPI12AAS00 RPT20AAS00 RPT20AAT00	RPC16AAS00 RPC16AMT00	QTY.
11	EBC00F		EBD01A-RE		1

Support leg subassembly left side					
NO.	RPI12MMS00 RPI12MMT00	RPI12AAS00 RPI12AAT00	RPC16AAS00 RPC16MMS00 RPC16AMT00	RPT20MMS01 RPT20MMS01 RPT20AAS00 RPT20AAS01 RPT20AAT00	QTY.
13	EBL00H	EBL00S	EBL00K	EBL00P	1

Clamp-right said					
NO.	RPI12MMS00 RPI12MMT00 RPT20MMS00	RPC16MMS00 RPT20MMS01	RPI12AAS00 RPI12AAT00 RPT20AAS00 RPT20AAS01 RPT20AAT00	RPC16AAS00 RPC16AMT00	QTY.
20	EBC00E		EBD01B-RE		1

Support leg subassembly right side					
NO.	RPI12MMS00 RPI12MMT00	RPI12AAS00 RPI12AAT00	RPC16AAS00 RPC16MMS00 RPC16AMT00	RPT20MMS01 RPT20MMS01 RPT20AAS00 RPT20AAS01 RPT20AAT00	QTY.
20	EBL00J	EBL00T	EBL00L	ELF00Q	1

Front fork subassembly						
NO.	RPI12MMS00 RPI12MMT00 RPI12AAS00 RPI12AAT00	RPC16MMS00 RPC16AMT00	RPC16AAS00	RPT20MMS00 RPT20MMS01	RPT20AAS00 RPT20AAS01 RPT20AAT00	QTY.
15	EBF00A	EBF00B	EBF00D	EBF00C	EBF00E	1

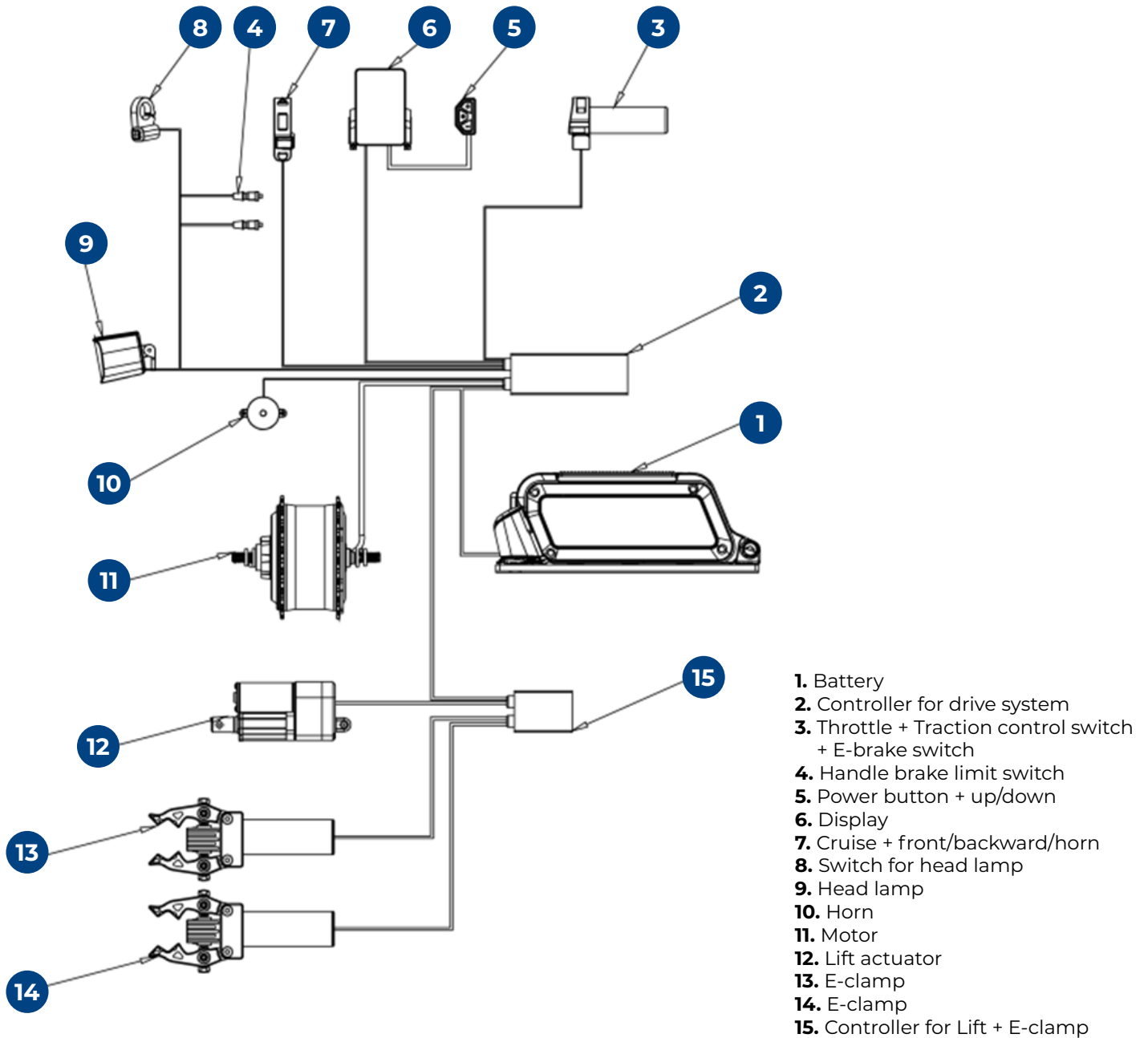
Handle bar					
NO.	RPI12AAT00 RPC20AAT00	RPI12MMS00 RPC16MMS00 RPT20MMS00 RPT20MMS01	RPI12MMT00 RPC16AMT00	RPI12AAS00 RPC16AAS00 RPT20AAS00 RPT20AAS01	QTY.
23	EBH00A	EBH00B	EBH00D	EBT00F	1

Mudguard					
NO.	RPI12MMS00 RPI12MMT00 RPI12AAS00 RPI12AAT00	RPC16MMS00 RPC16AAS00 RPC16AMT00	RPT20MMS00 RPT20AAS00 RPT20AAT00	RPT20MMS01 RPT20AAS01	QTY.
16	EBF102X2	EBF104A EBF102	EBF103	EBF105A EBF102	1

Lift system					
NO.	RPI12MMS00 RPI12MMT00	RPC16MMS00 RPC16AMT00 RPT20MMS01 RPT20MMS01	RPI12AAS00 RPI12AAT00	RPT20AAS00 RPT20AAS01 RPT20AAT00 RPC16AAS00	QTY.
23	EBA00C	EBA00B	EBA00A-BK	EBA01A-BK	1

3. ELECTRICAL SYSTEM

3.1. DESCRIPTION



ELECTRICAL CONTROL SYSTEM, REPAIR / EXCHANGE

No.	Item number	Name
1	EBTM0012	BRUSHLESS DC MOTOR FOR 12" WHEEL
2	EBTM0014	BRUSHLESS DC MOTOR FOR 14" WHEEL
3	EBTM0016	BRUSHLESS DC MOTOR FOR 16" WHEEL
4	EBTM0020	BRUSHLESS DC MOTOR FOR 20" WHEEL
5	EBE01Y-1	GEAR MOTOR FOR E-CLAMP, 24V, SUPPLIER T-Motion
6	EBE01Y-1	E-CLAMP CONTROLLER
7	EBE000	DISPLAY FOR E-BIKE, DongMei
8	EBE005	DM CONTROLLER FOR 12" 14"WHEEL
9	EBE006	DM CONTROLLER FOR 16" WHEEL
10	EBE007	DM CONTROLLER FOR 20"WHEEL
11	EBB0048	PANASONIC, LITHIUM BATTERY PACK
12	EBBC048	CHARGER FOR LITHIUM BATTERY
13	EBE002	LAMPER, Albertx, CABLE L=450MM
14	EBE002-12	LAMPER, Albertx, CABLE L=150MM
15	EBE00B-4	INTEGRATED WATERPROOF CABLE
16	EBE00Z	SWITCH WITH BAR SHAPE
17	EBE00W	HORN 48VDC
18	94RA65A	ACTUATOR TIMOTION TA2, STROKE 40
19	EBE00H	THROTTLE + 3 SWITCH
20	EBE004-A	LEFT 4 SWITCH BUS
21	EBE011	SWITCH FOR LAMP
22	EBE00F	BRAKE HANDLE

- Annual checking and maintenance. Check every function!
- Attention!!! Please power off the battery before plugging out any waterproof plug!!

3.2. BATTERY

- Repair / Exchange
Exchange to new battery if any problem, repair is not suggested.
- Annual checking and maintenance
If the battery consumes much faster than expectation, please change to new one.
- Attention!!!
Make sure the battery is power off when disconnect/connect wires.

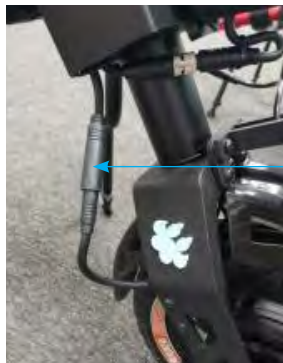
3.3. DISPLAY

- Repair / Exchange
Turn off the battery then restart the display if any problem, exchange to new display if this doesn't work, repair is not suggested.
- Annual checking and maintenance
Check every function to see if all parameters can be set up.
- Attention!!!
Make sure the relevant cables are well connected.

4. DRIVE WHEELS

4.1. TYRES AND TUBES

- Repair / Exchange
Disconnect the waterproof plug between controller and motor.



Remove the fastening clip of waterproof motor wire.



Remove the nut and bolt.



Remove motor & wheel from fork.



Exchange tire or tube. Put back motor wheel.
Adjust the disc brake to make sure the tire won't touch the disc plate.
Put back the fastening clip of waterproof motor wire, make sure to straighten it.
Connect the waterproof plug between controller and motor.

- Annual checking and maintenance
Check tread depth, and air pressure!
- Attention!!!
Change tire when tread depth <0.5mm!

4.2. DRIVE MOTOR

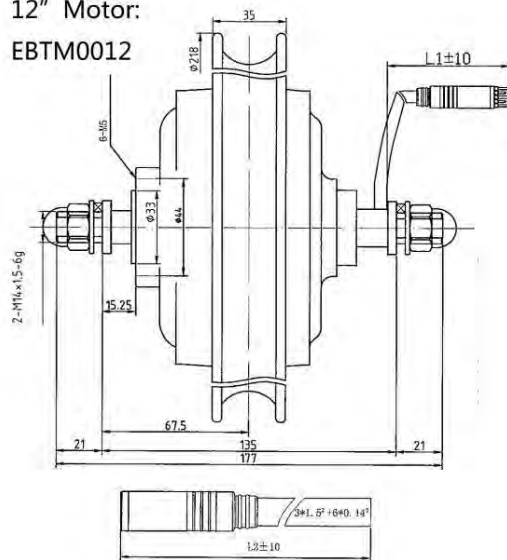
- Repair / Exchange

No.	Item number	Name
1	EBTM0012	BRUSHLESS DC MOTOR FOR 12" WHEEL
2	EBTM0014	BRUSHLESS DC MOTOR FOR 14" WHEEL
3	EBTM0016	BRUSHLESS DC MOTOR FOR 16" WHEEL
4	EBTM0020	BRUSHLESS DC MOTOR FOR 20" WHEEL

- Annual checking and maintenance
Check function!
- Error and solution
If motor broken, please change it!
- Attention!!!
Please take off the battery before plugging out any waterproof plug!!

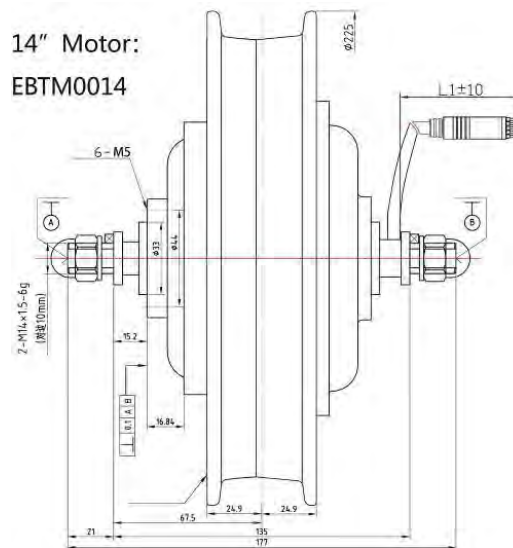
12" Motor:

EBTM0012



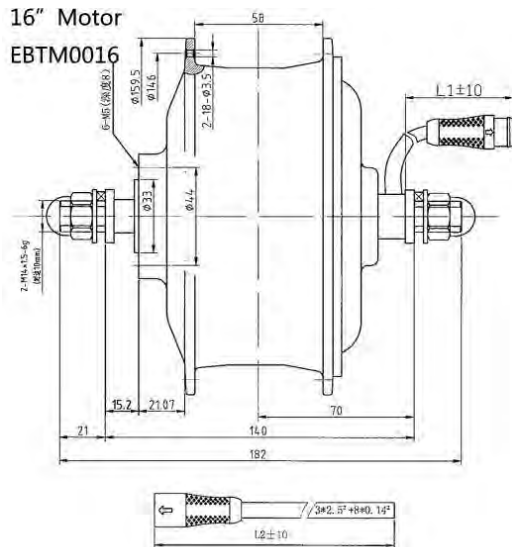
14" Motor:

EBTM0014



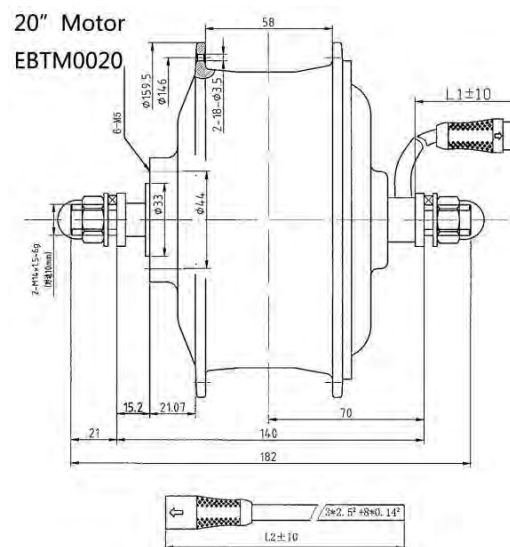
16" Motor

EBTM0016



20" Motor

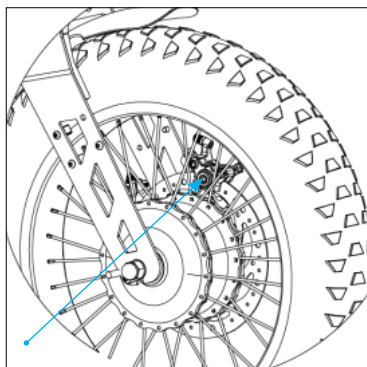
EBTM0020



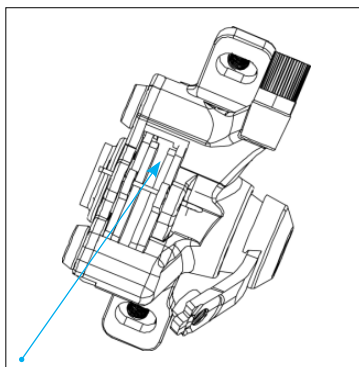
5. BRAKES SYSTEM

5.1. MECHANICAL, 5.2. ELECTRICAL

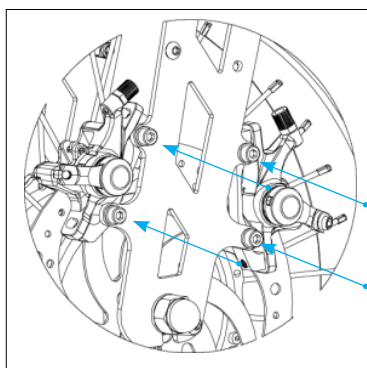
- Repair / Exchange
Please check the brake assembly and adjustment instructions.



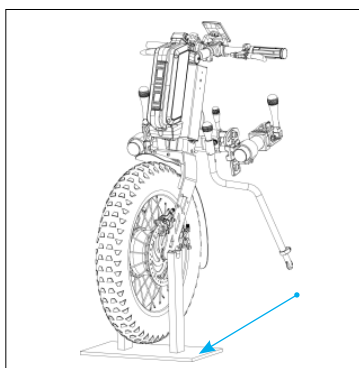
1. Fine adjust this bolt to change the distance between brake pad and disc plate.



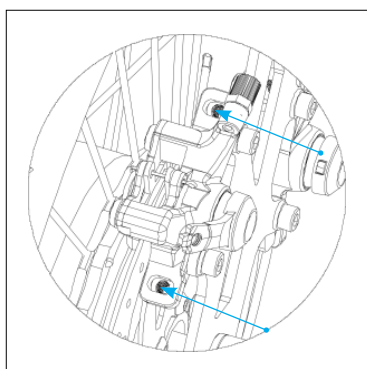
2. Use the 2.2-2.3 mm feeler gauge to check and adjust the distance between two brake pads, try to make it as parallel as possible.



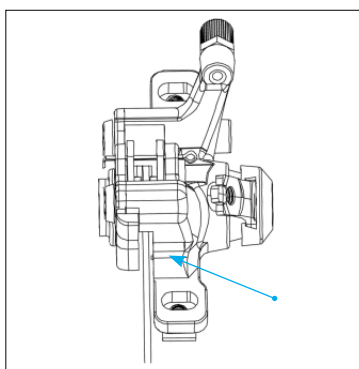
3. Assemble the caliper to fork, fix the bolt with Loctite 243, torque at 13Nm.



4. Mount the PAWS on the fixing base
12"/14" model 21895
16" model 21896
20" model 21893



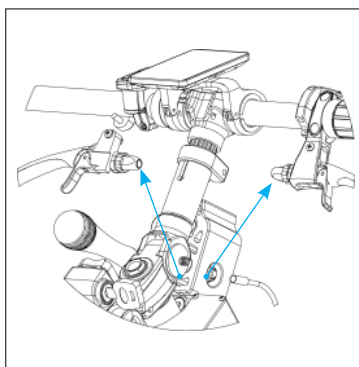
5. Assemble caliper, adjust the bolt shown to make sure the disc plate is right in the middle.



6. Firstly, pull the brake cable to the bottom, screw tightly the nut. Engage the brake cable to make sure disc plate is braked by both pads, at the same time use wrench to screw tightly the bottom bolt.



7. Assemble brake cable.



8. Adjust the adjuster on handle.



9. Adjust the adjuster on handle.



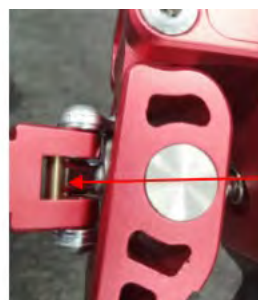
10. Put an end cable cap and use pliers to clamp tightly. At the end: Put it on a 10% slope with 120 kg load, check whether it can be parked with the brake engaged.

- Check the brake function at regular intervals, if response become slower, please adjust.
- Attention!!!
Ensure no lubricants touch the brake pad surfaces – this will reduce braking efficiency.

6. CLAMPING MECHANISMS

6.1. MANUAL

- Repair / Exchange
Any repair is not suggested, please change to new part if any problem.
- Annual checking and maintenance
Check whether the clamp hinge EBC022 works smoothly, if not then add lubricant on EBC022. Add lubricant at position A, B, C if you feel it can't move smoothly.



Manual clamping mechanism

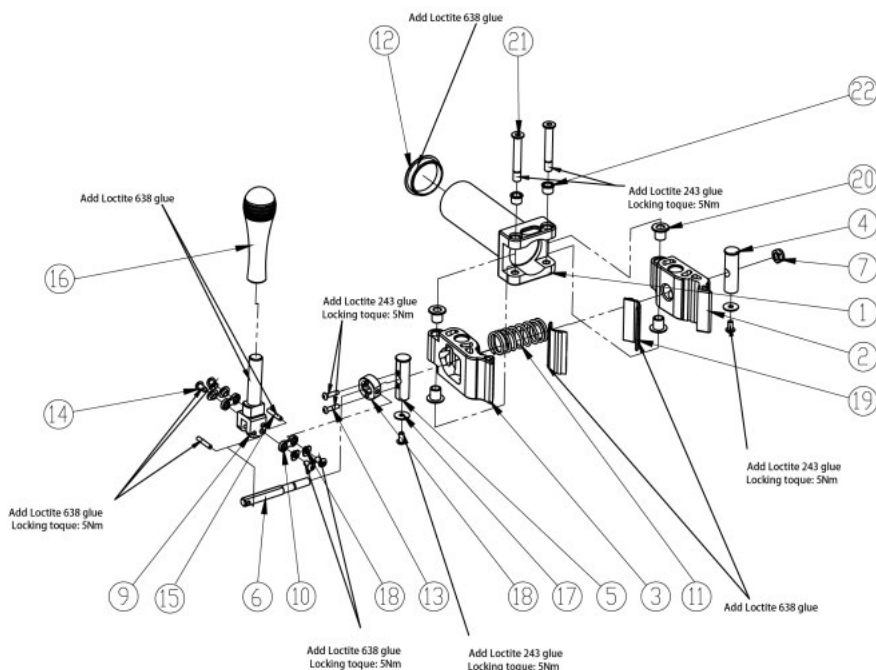
- Check whether the clamping force is appropriate, adjust tightness nut 19106B



Clamping force checking

PART LIST FOR LEFT SIDE MANUAL CLAMP – EBC00F

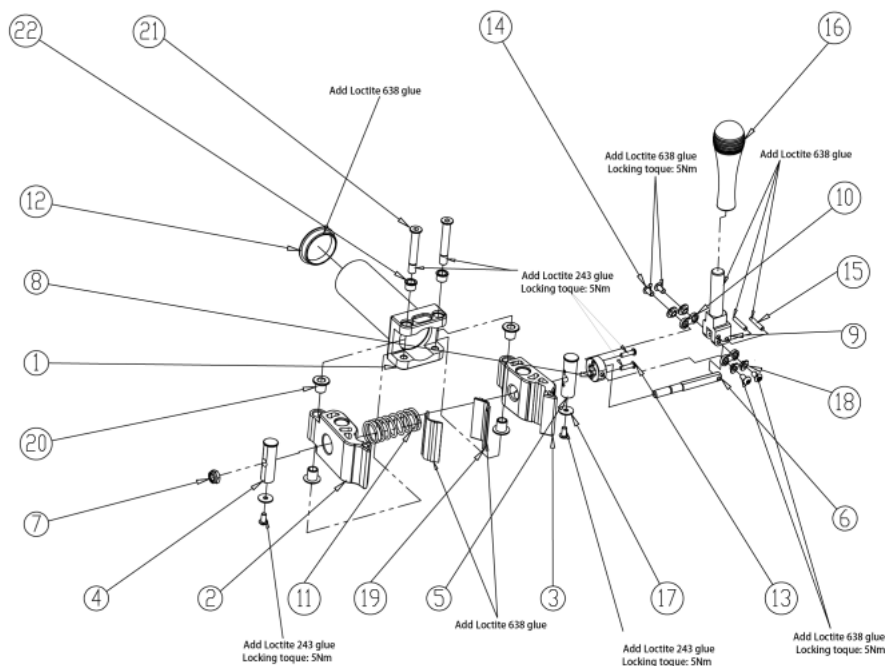
No.	Item number	Description	Qty.
1	EBC00E-O	Holder and tube	1
2	EBC002	Claw left and right side	1
3	EBC051	Claw with thread hole	1
4	EBC006	Axle	1
5	EBC005	Axle with thread hole	1
6	EBC007	Adjust spindle	1
7	191068	Lock nut M8 DIN985	2
8	EBC050	Spacer block	1
9	EBC048	Handle bracket	1
10	EBC022	Small arm	2
11	64106E	Spring D12 x d1.2 x 33	1
12	EBC010	Bushing D11 x d8 x 13.5	4
13	1910HK	Bolt M4 x 20 ISO7380	2
14	1910Q1	Bolt M5 x 10 ISO7380	6
15	EBC011	Pin D4 x 23.5	2
16	EBC049	Handle	1
17	EBC012	Bushing D11 x d8 x 9	2
18	EBC042	Bushing D7 x d5 x 3.3	4
19	EBC001-A	Protection plate	2
20	EBDO10	Plastic cover	1
21	EBDO11	Bolt M8 x 55	2
22	EBDO12	Spacer D16 x d5 x 1.5	2
23	1910NH	Bolt M3 x 8 DIN7991	4



Exploded drawing for left side manual clamp – EBC00F

PART LIST FOR RIGHT SIDE MANUAL CLAMP – EBC00E

No.	Item number	Description	Qty.
1	EBC00E-O	Holder and tube	1
2	EBC002	Claw left and right side	1
3	EBC051	Claw with thread hole	1
4	EBC006	Axle	1
5	EBC005	Axle with thread hole	1
6	EBC007	Adjust spindle	1
7	191068	Lock nut M8 DIN985	2
8	EBC050	Spacer block	1
9	EBC048	Handle bracket	1
10	EBC022	Small arm	2
11	64106E	Spring D12 x d1.2 x 33	1
12	EBC010	Plastic cover	1
13	1910HK	Bolt M4 x 20 ISO7380	2
14	1910Q1	Bolt M5 x 10 ISO7380	6
15	EBC011	Pin D4 x 23.5	2
16	EBC049	Handle	1
17	EBC012	Spacer D16 x d5 x 1.5	2
18	EBC042	Bushing D7 x d5 x 3.8	4
19	EBC001-A	Protection plate	2
20	EBDO10	Bushing D11 x d8 x 13.5	4
21	EBDO11	Bolt M8 x 55	2
22	EBDO12	Spacer D11 x d8 x 9	2
23	1910NH	Bolt M3 x 8 DIN7991	4

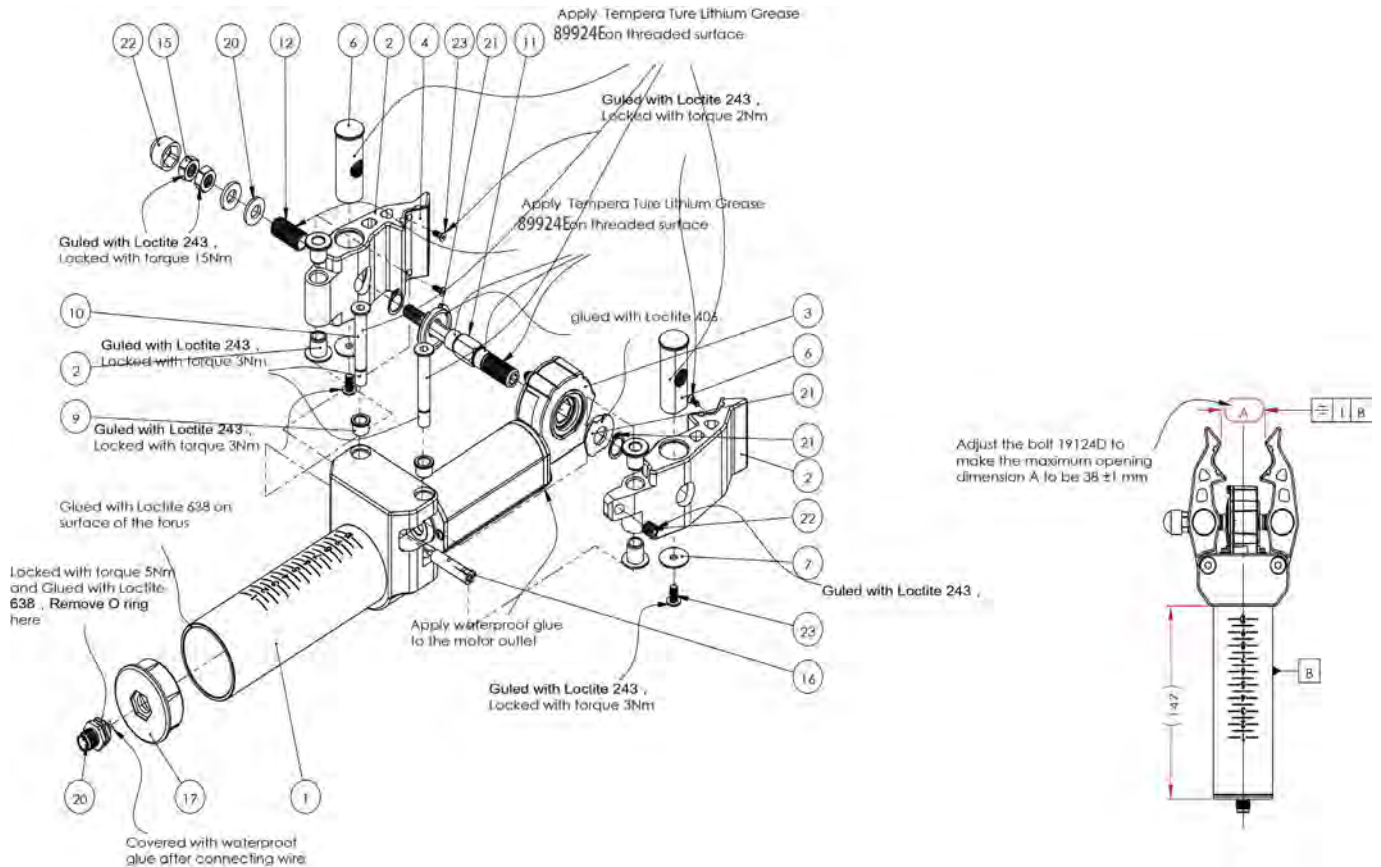


Exploded drawing for right side manual clamp – EBC00F

6.2. AUTOMATIC

- Repair / Exchange

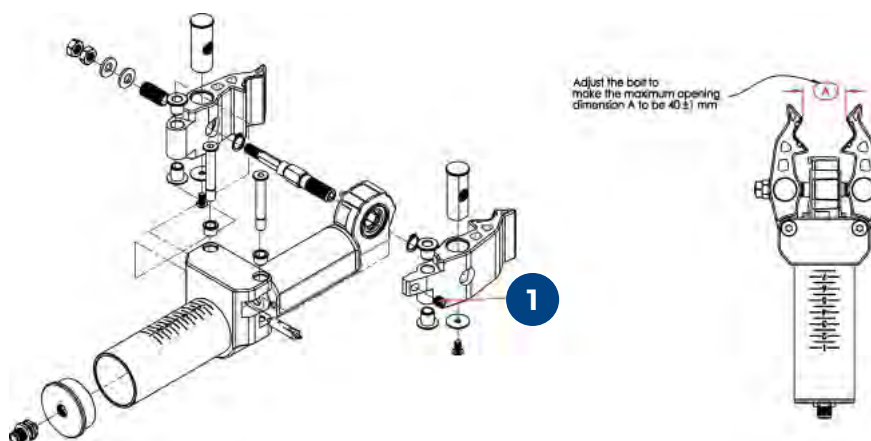
If the clamp shut down completely, it is suggested to exchange for new part. Repair is not preferred here, in case any inappropriate operation cause further injuries/damages. If some screws/nuts etc. fasteners get loose, repair and maintenance is applicable here, please refers to exploded drawing.



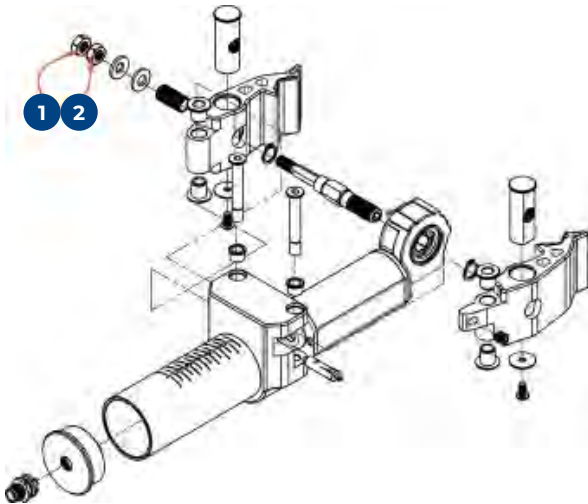
Exploded drawing of auto clamp

- Annual checking and maintenance

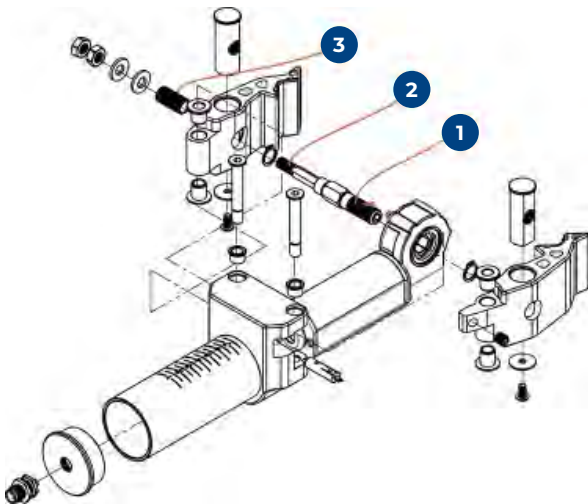
Adjust set screw at regular intervals on the clamping jaw, to make sure the maximal opening dimension, turn wrench clockwise to decrease, anticlockwise to increase. The suggested maximal opening dimension is 40 ± 1 mm.



Check whether the ① M8 nut is tightly locked. If it gets loose, please add Loctite 243 and tighten to 15 Nm torque.



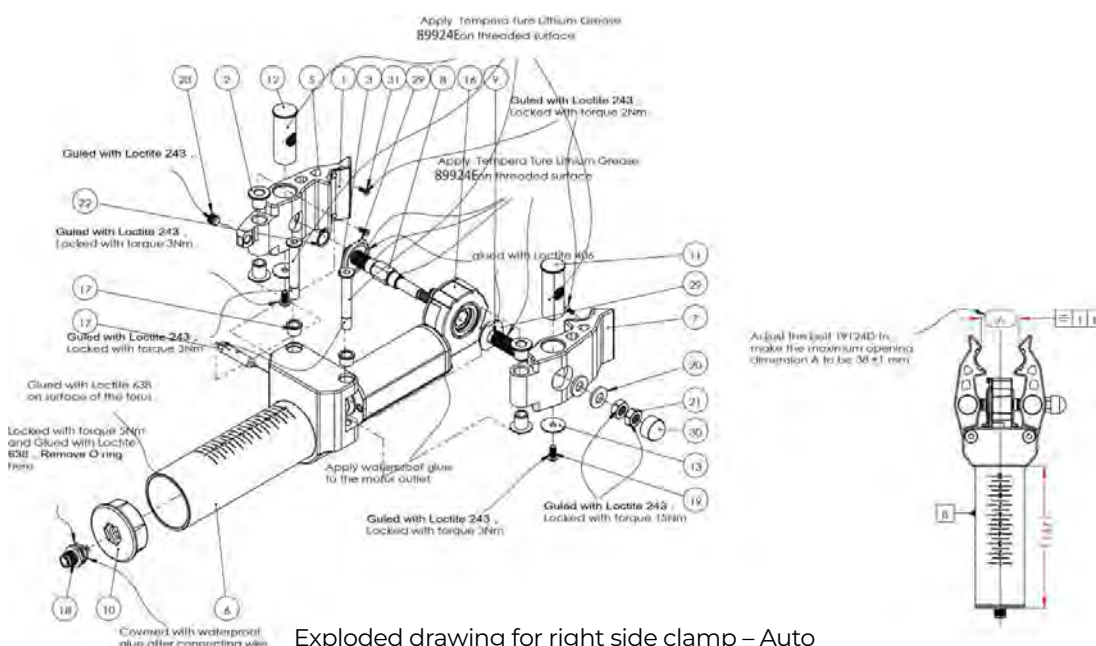
Add lubricant on the bolt thread at regular intervals, adjust to minimal opening distance to add lubricant on outer thread, adjust to the maximal opening distance to add lubricant on inner thread.



- Error and solution
 1. The motor doesn't work – change full set of E-clamp.
 2. The mechanism get stuck – change full set of E-clamp.

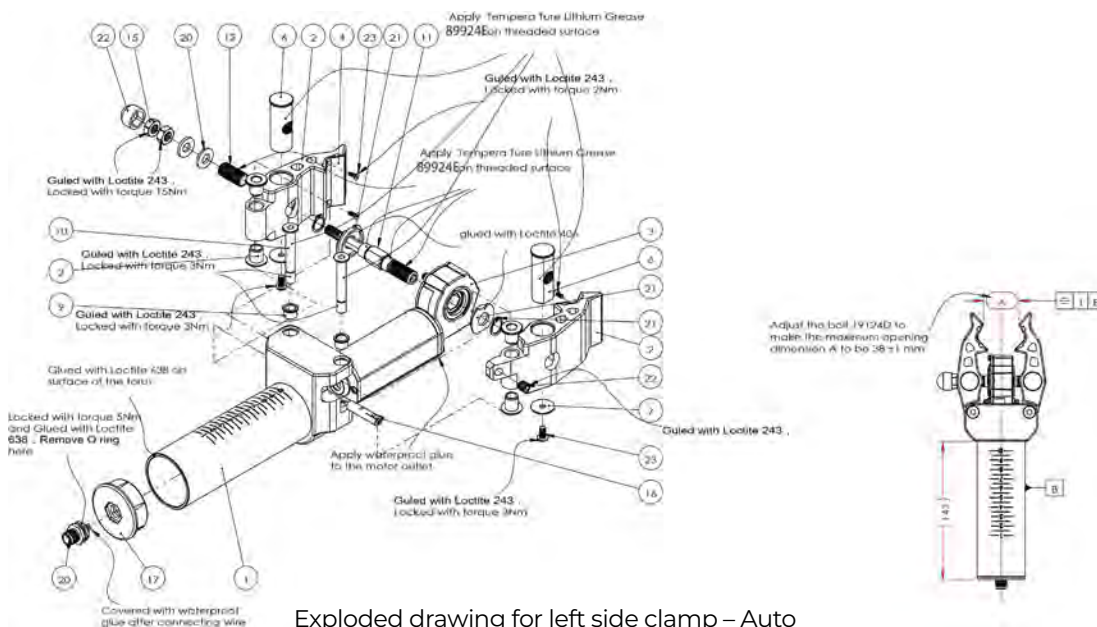
PART LIST FOR RIGHT SIDE CLAMP – AUTO

No.	Item number	Description	Qty.
1	EBCOO1-A	Clamp pad with 2 D3.2 holes	2
2	EBDO10	Flange bush for clamp	4
3	EBDO11	Pivot, D8, with M8 head and hex, socket	2
4	EBDO12	Bush, D13 x 8 x 9	2
5	EBDO19R	Electric clamp claw with plectrum, right	1
6	EBDO24	Electric clamp claw without plectrum	1
7	EBDO25R	Hexagon shaft, SW13 x 96, right	1
8	EBDO26L	Threaded bush with Hex. hole, left	1
9	EBDO28	Plug for arm tube	1
10	EBDO29L	Pivot, with M12 x 1 hole, left	1
11	EBDO29R	Pivot, with M12 x 1 hole, right	1
12	EBDO30	Flat washer, D19.8 x d5 x 1.5	2
13	EBDO31R	Electric clamp bracket weldment, L=162, right	1
14	EBDO33	Waterproof plug	1
15	EBDO34	Waterproof plug	1
16	EBEO1Y	Gear motor, 24V, 110RMP, 27N/m, T-Motion brand, stronger gear	1
17	EBEOOZ-1	Switch with bar shape, D8 x L27.5	1
18	EBEO12	Five-core waterproof plug, with rubber ring and mounting nut	1
19	1910Q1	Bolt, ISO7380 – M5 x 10, grade 10.9	2
20	1925BC	Spring washer, DIN6796-8, brown	2
21	19205V	Nut, DIN936-M8, thin, stainless steel	2
22	898989	Circlip, DIN471-12, black	2
23	19124D	Bolt DIN913-M8 x 8, black	1
24			1
25	64400X	Hexagon cover cup for M8 nut	1
26	1910NH	Bolt DIN7991-M3 x 8, 10.9g, black	4



PART LIST FOR LEFT SIDE CLAMP - AUTO

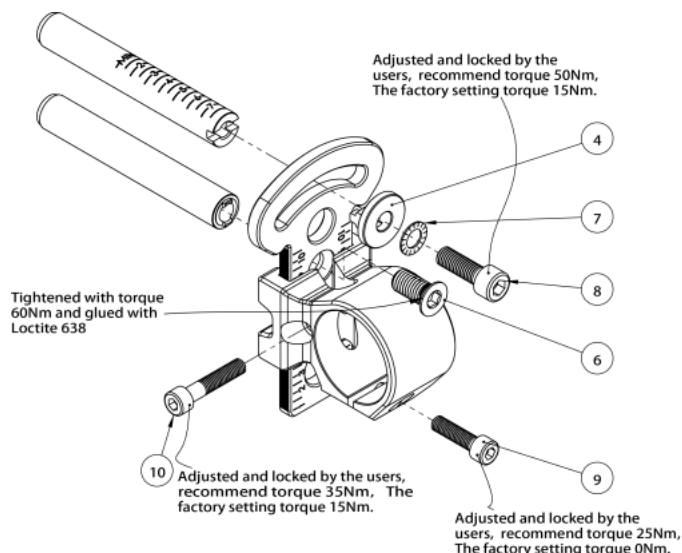
No.	Item number	Description	Qty.
1	EBCOOI-A	Clamp pad with 2 D3.2 holes	2
2	EBDO10	Flange bush for clamp	4
3	EBDO11	Pivot, D8, with M8 head and hex, socket	2
4	EBDO19L	Electric clamp claw with plectrum, left	1
5	EBDO12	Bush, D13 x d8 x 9	2
6	EBDO24	Electric clamp claw without plectrum	1
7	EBDO25L	Hexagon shaft, SW13 x 96, left	1
8	EBDO26R	Threaded bush with Hex. hole, right	1
9	EBDO28	Plug for arm tube	1
10	EBDO29L	Pivot, with M12 x 1 hole, left	1
11	EBDO29R	Pivot, with M12 x 1 hole, right	1
12	EBDO30	Flat washer, D19.8 x d5 x 1.5	2
13	EBDO31L	Electric clamp bracket weldment, L=162, left	1
14	EBDO33	Waterproof plug	1
15	EBDO34	Waterproof plug	1
16	EBE012	Five-core waterproof plug, with rubber ring and mounting nut	1
17	EBE01Y	Gear motor, 24V, 110RMP, 27N/m, T-Motion brand, stronger gear	1
18	EBEOOZ-1	Switch with bar shape, D8 x L27.5	1
19	19205V	Nut, DIN936-M8, thin, stainless steel	2
20	1925BC	Spring washer, DIN6796-8, brown	2
21	898989	Circlip, DIN471-12, black	2
22	19124D	Bolt DIN913-M8 x 8, black	1
23	1910Q1	Bolt ISO7380-M5 x 10, grade10.9	2
24			1
25	64400X	Hexagon cover cup for M8 nut	1
26	1910NH	Bolt DIN7991-M3 x 8, 10.9g, black	4



Exploded drawing for left side clamp – Auto

SIDE BRACKET

- Repair / Exchange
If some screws/nuts etc. fasteners get loose, repair and maintenance is applicable here, please refers to exploded drawing.



INDEX	ITEM NO.	DESCRIPTION	Qty.	MATERIAL
4	EBC038	Special washer, black	1	C45 Steel
6	1910NW	Special bolt, M12x25, 10.9 garde	1	40Cr steel
7	1925B0	Serrated lock washer, DIN6798-M10	1	Stainless steel
8	1912R8	Bolt DIN912-M10x25, black	1	Steel
9	191455	Bolt DIN912-M8x30, 10.9G, black	1	Steel
10	1910SD	Bolt DIN912-M8x40, threaded length 28, silver	1	Steel

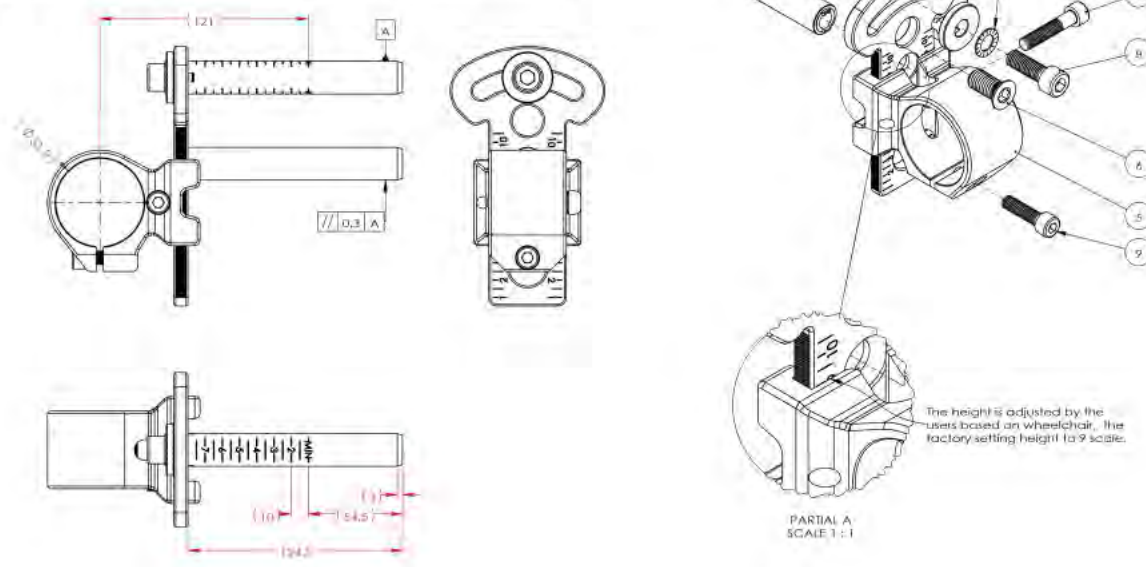
Exploded drawing of side bracket

- Annual checking and maintenance
Check the screws/nuts etc. fasteners as mentioned above.

Right Side Bracket

Item number	Clamp rim colour
EBC041R-SI	Silver anodized
EBC041R-BK	Black anodized

1	EBC034	Side bracket arm without scale, L=125mm	1	Stainless steel
2	EBC035W	Side bracket plate, with scale	1	304 Stainless steel
3	EBC036	Side bracket arm with scale, L=125mm	1	Stainless steel
4	EBC038	Special washer, black	1	C45 Steel
5	EBC039R	Clamp bracket, right	1	A356 Alu, alloy
6	1910NW	Special bolt, M12x25, 10.9 garde	1	40Cr steel
7	1925B0	Serrated lock washer, DIN6798-M10	1	Stainless steel
8	1912R8	Bolt DIN912-M10x25, black	1	Steel
9	191455	Bolt DIN912-M8x30, 10.9G, black	1	Steel
10	1910SD	Bolt DIN912-M8x40, threaded length 28, silver	1	Steel

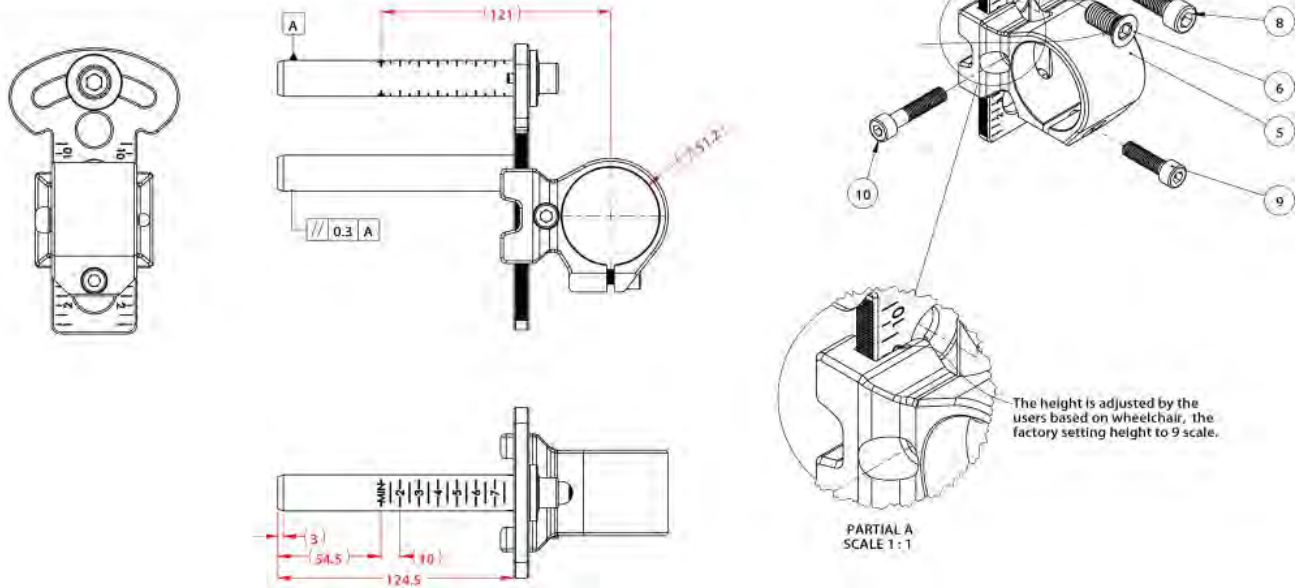


Exploded drawing and part list of right side bracket

Left Side Bracket

Item number	Clamp rim colour
EBC0411-SI	Silver anodized
EBC0411-BK	Black anodized

INDEX	ITEM NO.	DESCRIPTION	Qty.	MATERIAL
1	EBC034	Side bracket arm without scale, L=125mm	1	Stainless steel
2	EBC035W	Side bracket plate, with scale	1	304 Stainless steel
3	EBC036	Side bracket arm with scale, L=125mm	1	Stainless steel
4	EBC038	Special washer, black	1	C45 Steel
5	EBC039L	Clamp bracket, left	1	A356 Alu. alloy
6	1910NW	Special bolt, M12x25, 10.9 garde	1	40Cr steel
7	1925B0	Serrated lock washer, DIN6798-M10	1	Stainless steel
8	1912R8	Bolt DIN912-M10x25, black	1	Steel
9	1914S5	Bolt DIN912-M8x30, 10.9G, black	1	Steel
10	1910SD	Bolt DIN912-M8x40, threaded length 28, silver	1	Steel

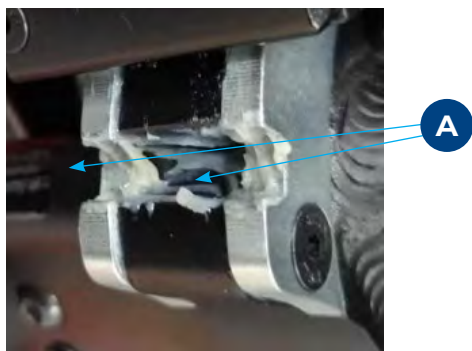


Exploded drawing and part list of left side bracket

7. LIFTING MECHANISMS

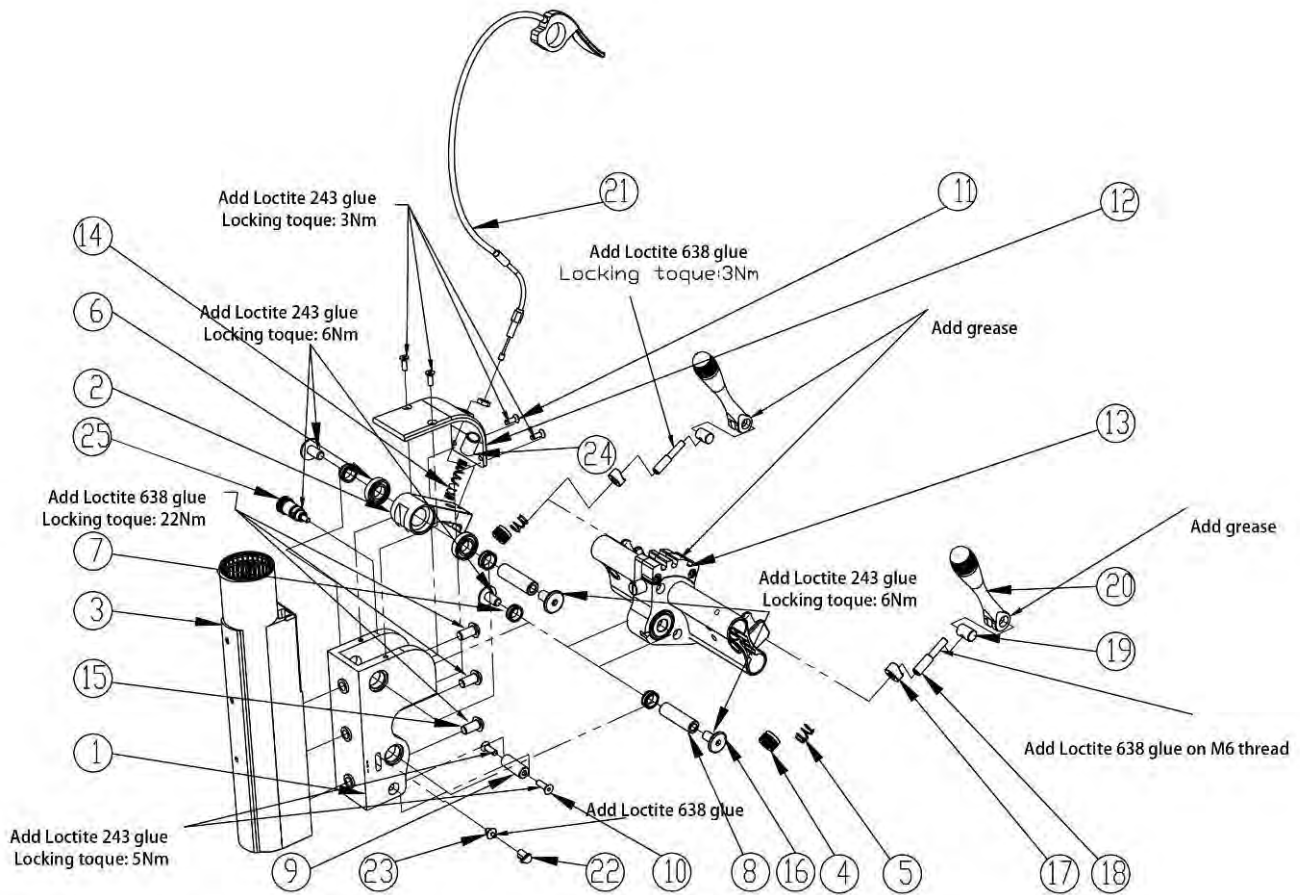
7.1. MANUAL

- Repair / Exchange
Repair is not suggested, please change complete part if any problem.
- Annual checking and maintenance
Add lubricant at position A.



PART LIST OF MANUAL LIFTING MECHANISM

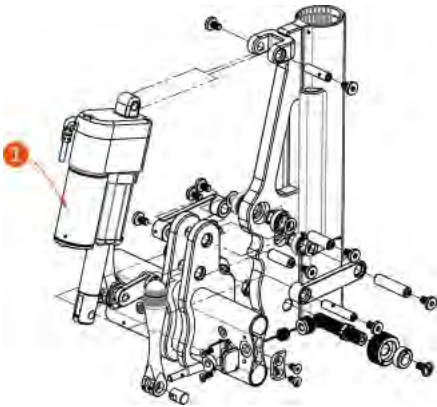
No.	Item number	Description	Qty.
1	EBA101	Housing ALU 6061	1
2	EBA103	Hook stainless steel	1
3	EBA120	Head tube ALU	1
4	EBA118	QR nut	2
5	64106D	Pressure spring	1
6	69400C	Bearing d12 x D24 x 6 mm	2
7	EBA108	Bushing D15.65 x d12 x 6 mm	4
8	EBA110	Gear axle D12 x 41.75mm	2
9	EBA111	Limited axle D11.5 x 28	1
10	191487	Bolt M5 x 16 DIN7991 8.8	2
11	1910MX	Bolt M4 x 12 DIN7991 12.9	4
12	EBA107	Housing cover ALU	1
13	EBA00F-1	Gear with support tube	1
14	HP014P	Press spring D7 x 1 x 35 mm	1
15	1910E9	Bolt M8 x 16 ISO7380 8.8	3
16	EBA162	Bolt M8 x 12 8.8	4
17	EBA116	QR spacer bronze	2
18	EBA117	QR bolt stainless steel	2
19	EBA119	QR axle stainless steel	2
20	EBA115	QR handle ALU	2
21	EBA142	Cable with release handle	1
22	EBA135	Arrow	1
23	EBA136	Bolt	1
24	EBA156	Bushing D14 x d10 x 14.5 mm	1
25	EBA00B-S	Safety lock	1



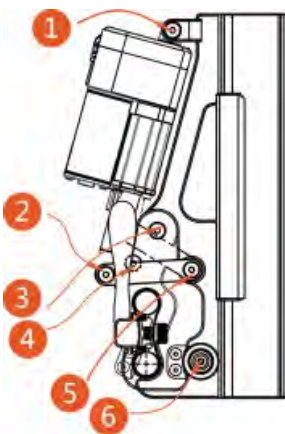
Exploded drawing of manual lifting mechanism

7.2. AUTOMATIC

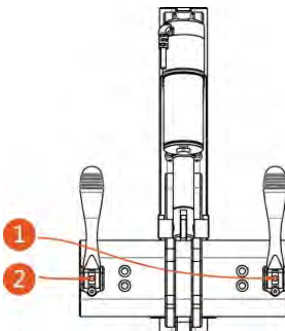
- Repair / Exchange
If some screws/nuts etc. fasteners get loose, repair and maintenance is applicable here, please refer to exploded drawing.

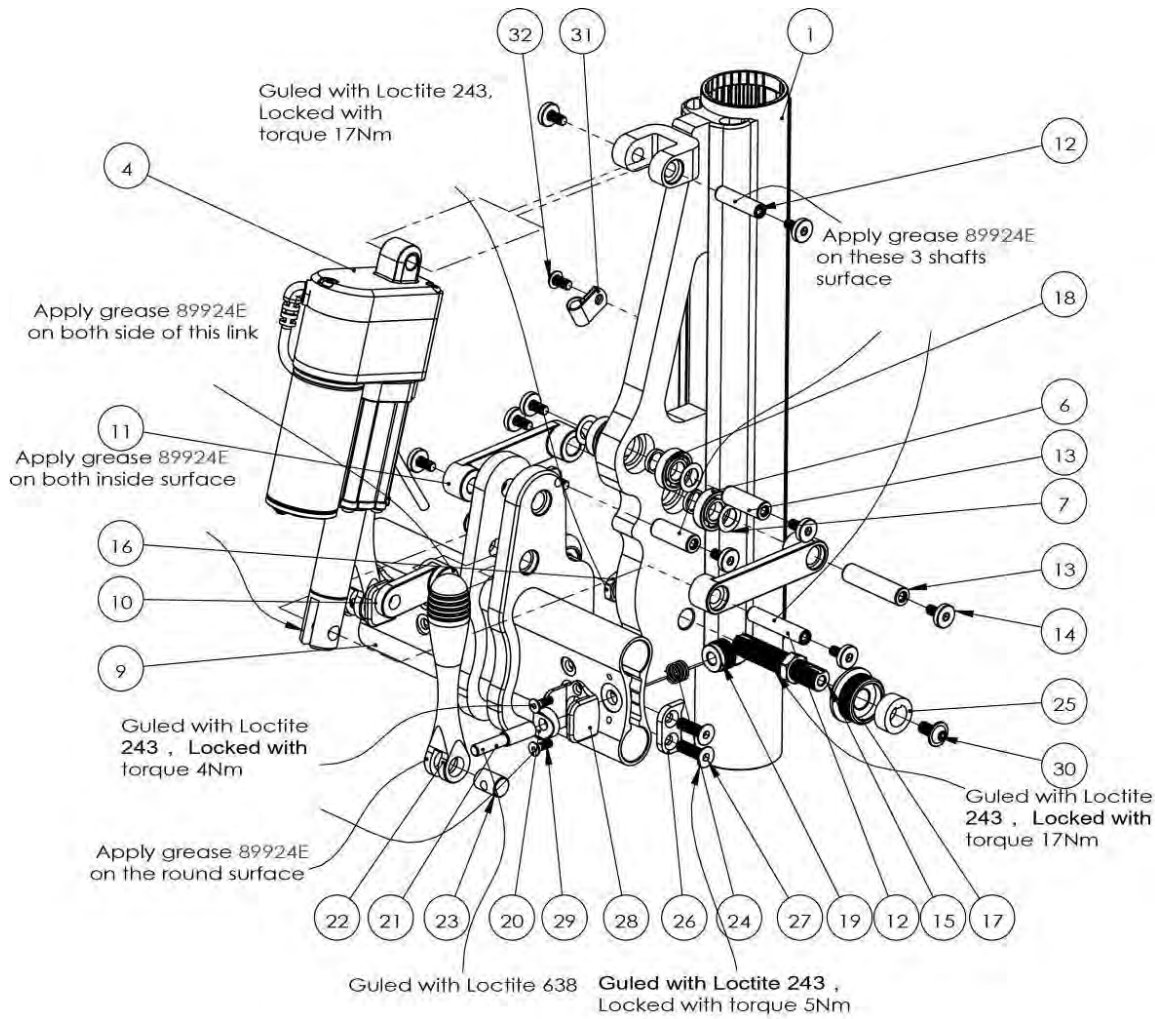


- Annual checking and maintenance
Check set screw at regular intervals. If loosened, check the thread integrity and re-fasten it, using Loctite 638.

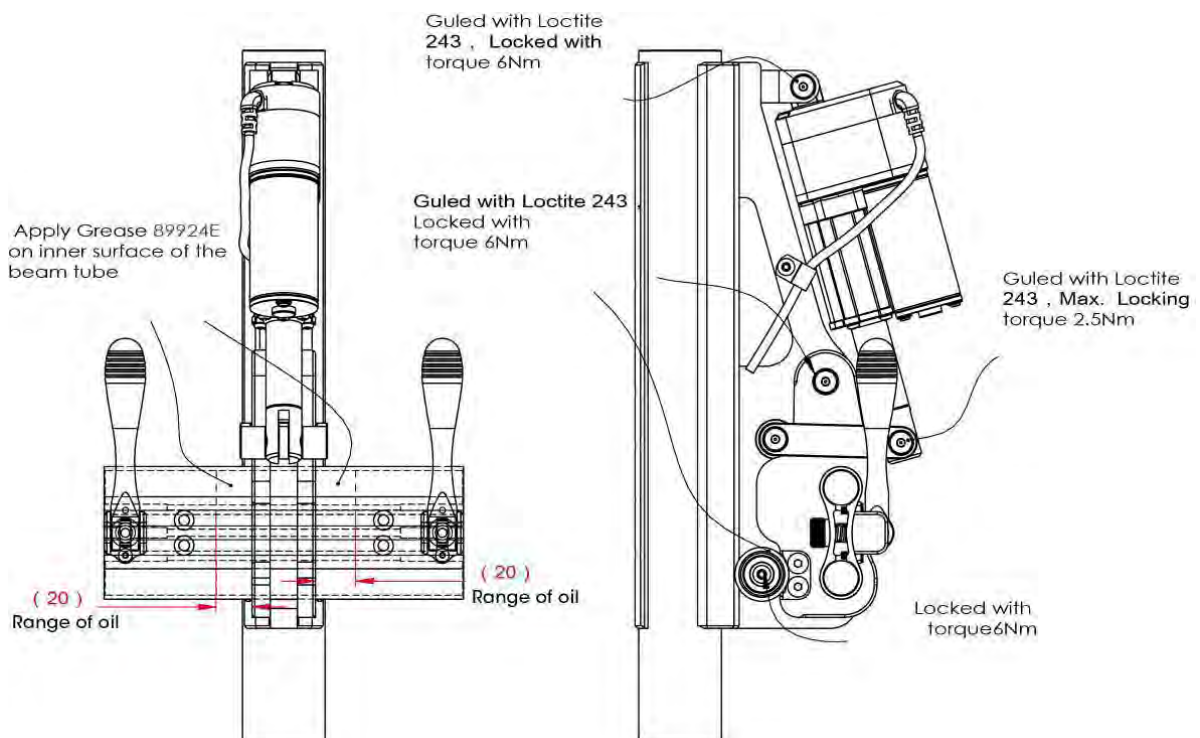


Add lubricant on the eccentric clamp.





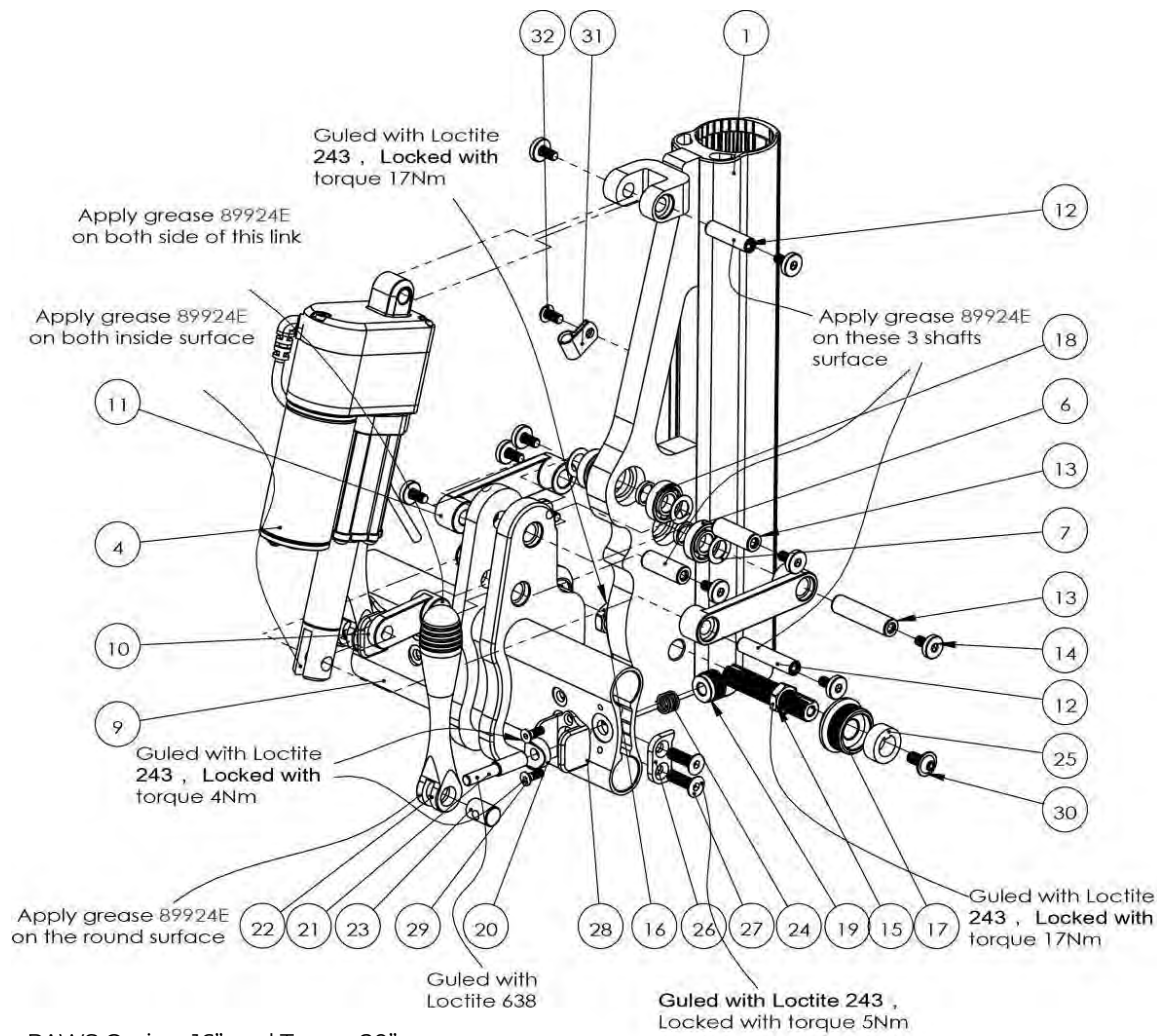
For PAWS City 12"/14"



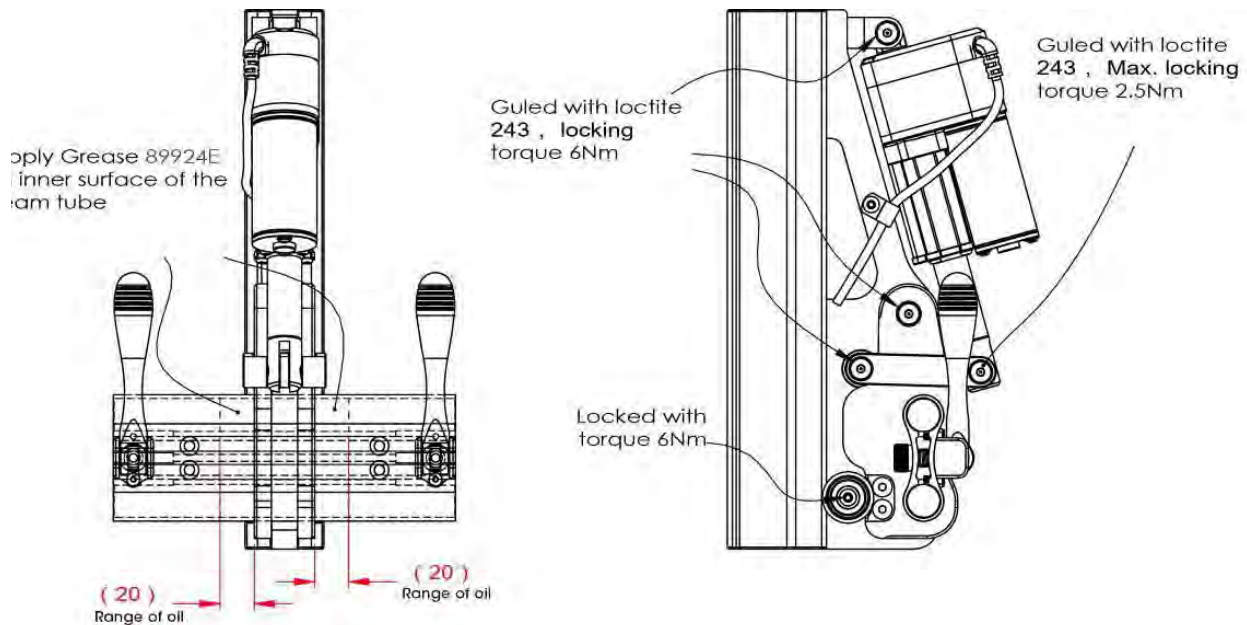
Exploded drawings of auto lifting mechanism

PART LIST OF AUTO LIFTING MECHANISM PAWS CITY 12" AND 14"

No.	Item number	Description	Qty.
1	EBA002	Toggle center connecting rod	1
2	EBA003	Toggle side connecting rod	2
3	EBA005	Swing arm with two beams, weldment, beam L=200	1
4	EBA010	Pivot pin, Ø10 x 28.2	1
5	EBA011	Pivot pin, Ø10 x 41.5	2
6	EBA012	Pivot pin, Ø8 x 31.2	1
7	EBA013	Pivot pin, Ø8 x 41.5	1
8	EBA014	Support bolt for locking mechanism	1
9	EBA015	Stop wedge nut for locking mechanism	2
10	EBA016	Thin nut, M12 x 1.25	1
11	EBA019	Stop nut for locking mechanism	2
12	EBA023	Hard pad	2
13	EBA028	Flange head bolt M5 x 10, black	10
14	EBA004	Steering column weldment	1
15	EBA115	Quick release handle	2
16	EBA116	Quick release spacer	2
17	EBA117	Quick release bolt	2
18	EBA118	Quick release nut	2
19	EBA119	Quick release pivot	2
20	EBA132	Guider of QR	2
21	EBH111	Plastic cable clamp	1
22	64106D	Compression spring, D10.3 x D1.0 x 15	2
23	1925A4	Thin washer, D10 x D16 x 0.5	4
24	19426S	Distance tube, D10.5 x D13 x 2.3	2
25	69402F	Ball bearing 61900, D22 x D10 x 6	4
26	19120A	Bolt DIN7991-M5 x 10, black, tuf-lock	4
27	1910MX	Bolt DIN7991-M4 x 12, 10.9G, black	4
28	1910BG	Bolt BN11252-M6 x 12, grade 8.8, black	2
29	19102C	Bolt ISO7380-M5 x 10, 8.8G, with tuf-lock	1
30	94RA66A	Actuator, T-motion TA2, stroke 38 mm, loading 1000N	1



For PAWS Cruiser 16" and Tourer 20"



Exploded drawings of auto lifting mechanism

PART LIST OF AUTO LIFTING MECHANISM PAWS CRUISER 16" AND TOURER 20"

No.	Item number	Description	Qty.
1	EBA002	Toggle center connecting rod	1
2	EBA003	Toggle side connecting rod	2
3	EBA044	Steering column weldment	1
4	EBA003	Swing arm with two beams, weldment, beam L=200	1
5	EBA010	Pivot pin, Ø10 x 28.2	2
6	EBA011	Pivot pin, Ø10 x 41.5	1
7	EBA012	Pivot pin, Ø8 x 31.2	1
8	EBA013	Pivot pin, Ø8 x 41.5	1
9	EBA014	Support bolt for locking mechanism	1
10	EBA015	Stop wedge nut for locking mechanism	2
11	EBA016	Thin nut, M12 x 1.25	1
12	EBA019	Stop nut for locking mechanism	2
13	EBA023	Hard pad	2
14	EBA028	Flange head bolt M5 x 10, black	10
15	EBA115	Quick release handle	2
16	EBA116	Quick release spacer	2
17	EBA117	Quick release bolt	2
18	EBA118	Quick release nut	2
19	EBA119	Quick release pivot	2
20	EBA132	Guider of QR	2
21	EBH111	Plastic cable clamp	1
22	69402F	Ball bearing 61900, D22 x D10 x 6	4
23	1925A4	Thin washer, D10 x D16 x 0.5	4
24	19426S	Distance tube, D10.5 x D13 x 2.3	2
25	64106D	Compression spring, D10.3 x D1.0 x 15	2
26	19120A	Bolt DIN7991-M5 x 10, black, tuf-lock	4
27	1910MX	Bolt DIN7991-M4 x 12, 10.9G, black	4
28	1910BG	Bolt BN11252-M6 x 12, grade 8.8, black	2
29	19102C	Bolt ISO7380-M5 x 10, 8.8G, with tuf-lock	1
30	94RA66A	Actuator, T-motion TA2, stroke 45 mm, loading 1000N	1

8. HANDLEBAR CONTROLS

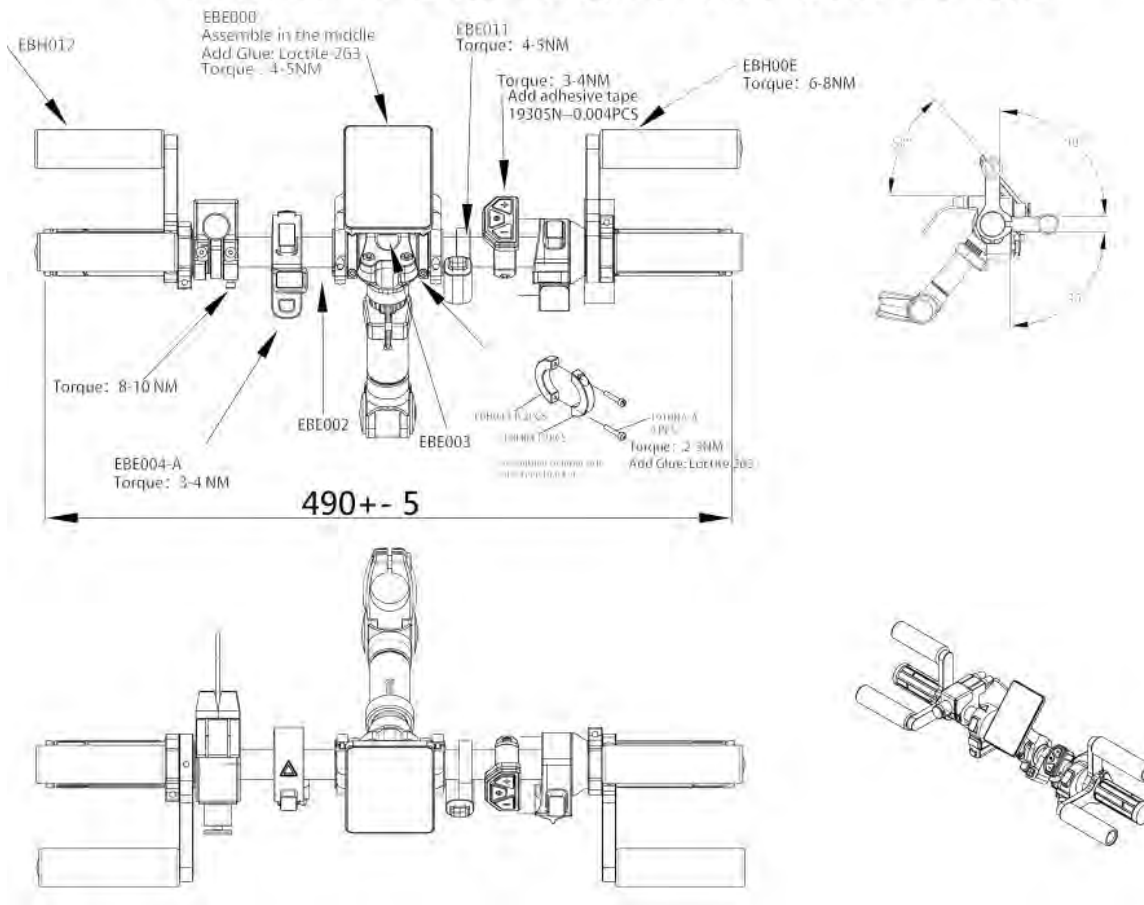
8.1. HORN / CRUISER CONTROL / LIGHTS / ANTI-SLIP CONTROL

- Repair / Exchange
Repair is not suggested, please change complete part if any problem.
- Annual checking and maintenance
Check function!
- Error and solution
If these don't work, please change it!
- Attention!!!
Please make sure that the battery is on when checking the functions!

8.2. TETRA AND STANDARD CONTROL

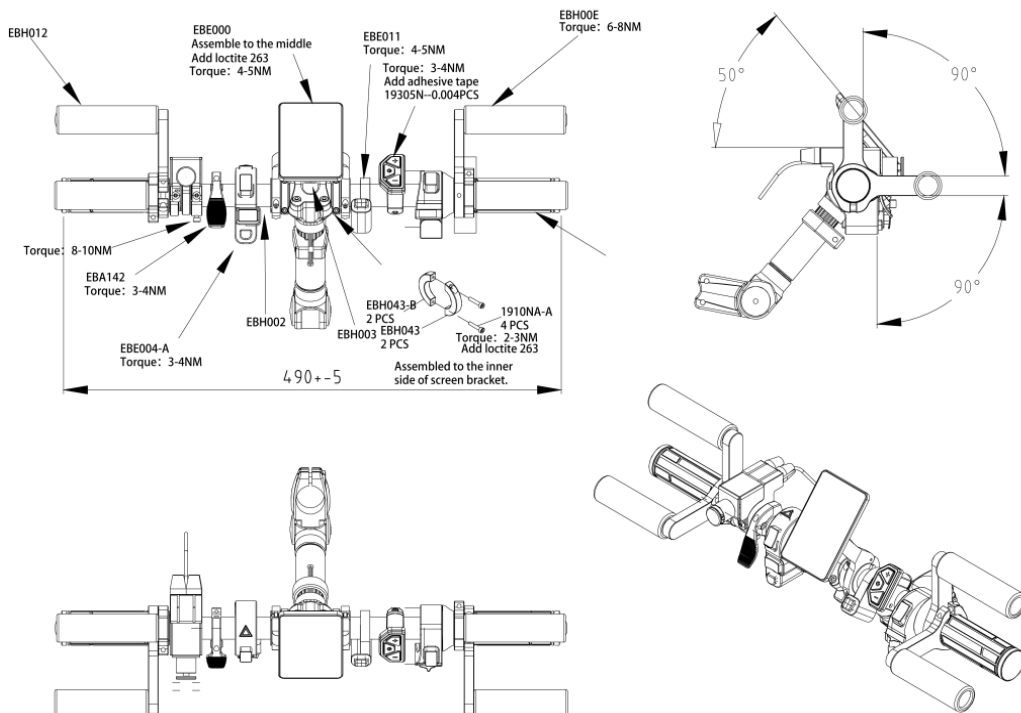
- Repair / Exchange
Check the torque of bolt.
- Annual checking and maintenance
Tetra Controls - Tetra brake daily maintenance and vulnerable part.
Replacing the foam covers on the Tetra handles
Handle position adjustment
Fastening bolt's check, fasten the bolt which become loose.
Check whether parking function works well.
Add lubricant from time to time, to reduce brake force resistance.
Controller and meter daily maintenance and failure process.
Check whether communication between controller and meter works well
Check whether all icons on meter shows up in good condition
Check whether functions like (walk, cruise, e-brake etc.) works well.
Steering handle daily maintenance and failure process
Check whether parts are loose, and fasten it timely
Check whether buttons work well
Exchange the stickers on the button.
- Error and solution
If button lose efficacy, please change the unit!
- Attention!!!
Please take off the battery before plugging out any waterproof plug!

Handle Bar for Auto Ebike,with tetra brake -EBH00A



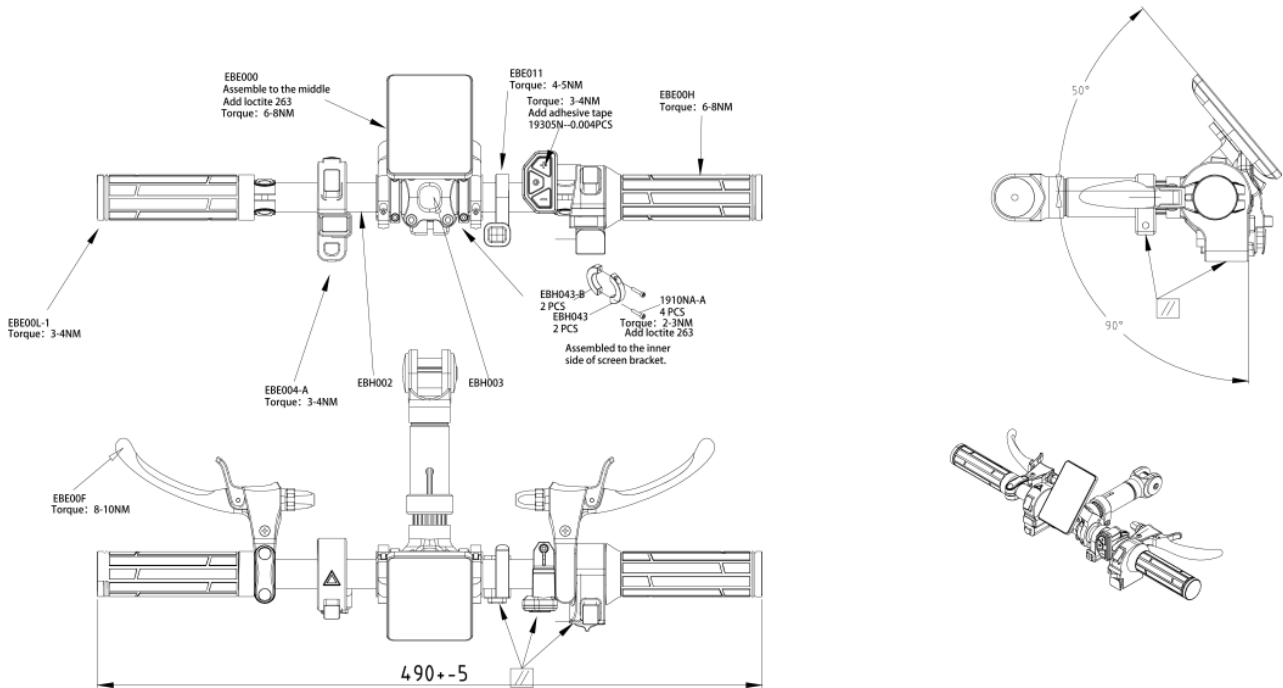
Exploded drawings of tetra handlebar – Auto (EBH00A)

Handle Bar for manual Ebike,with tetra brake - EBH00D



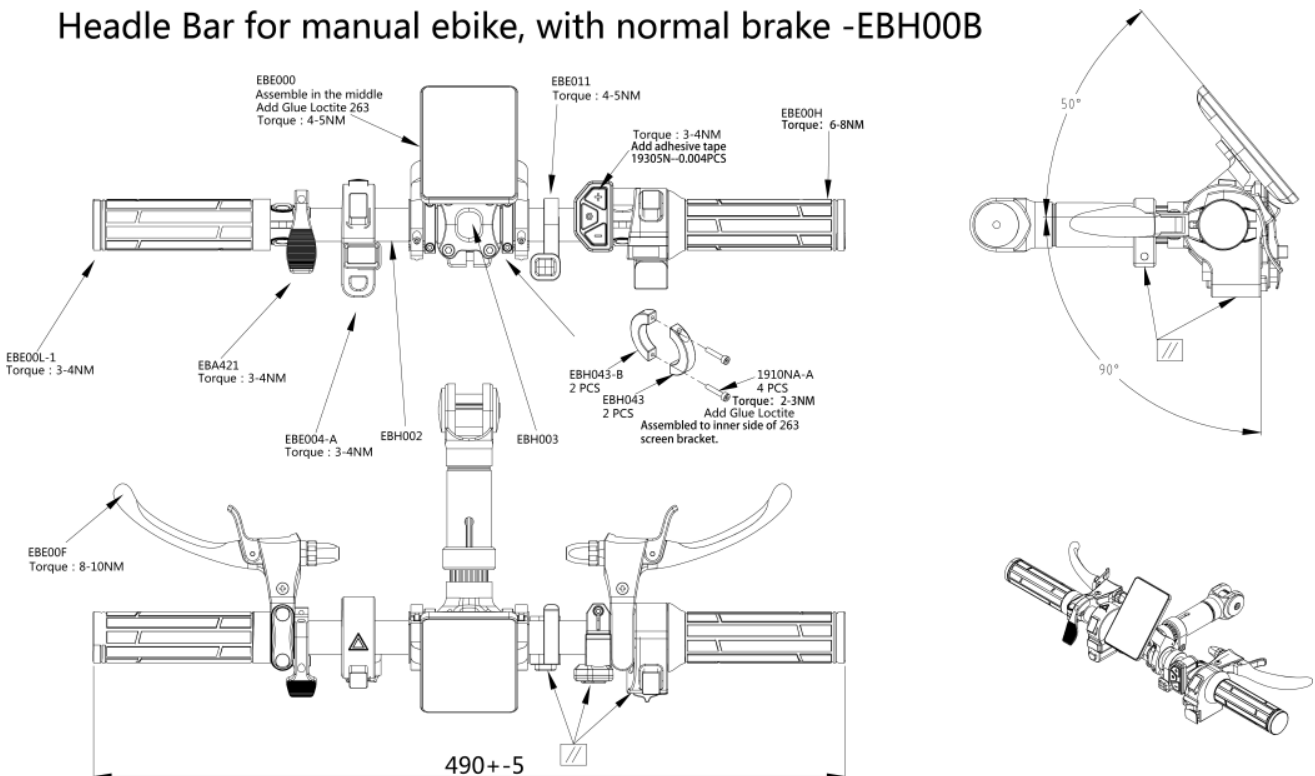
Exploded drawings of tetra handlebar – Manual (EBH00D)

Handle Bar for Auto Ebike,with normal brake - EBH00F



Exploded drawings of standard handlebar – Auto (EBH00F)

Headle Bar for manual ebike, with normal brake -EBH00B



Exploded drawings of standard handlebar – Manual (EBH00B)

9. ACCESSORIES

- Head Lamp, Basket, Mud Guard etc.
It is suggested to change to new one if any problem.

10. TROUBLE SHOOTING

No.	Function (Grouping)	Error description	Solution
1	No throttle response	Brakes are locked on - power circuit interrupted	Release the brake to re-open power circuit.
2		Throttle broken	Check the throttle cable Change throttle Contact dealer
3	Cannot change gear to "0" setting	Throttle partly engaged.	Ensure the throttle is fully released. Clean and lubricant if dirty.
4	Motor issue	Motor hall sensor broken	Check motor cable to see if it is well connected. Disconnect the motor cable, find a new device in same model, reconnect the cable with motor wheel in new device. If error still exist, then the error comes from controller. Change the controller. If not, then change the motor wheel. Contact dealer
5		Motor temperature protection value	
6	Controller issue	Controller temperature protection value	Allow controller to cool down. Still not work, change the controller. Contact the dealer.
7	Speed Sensor issue	Speed sensor broken	Contact dealer

11. FAQ'S

N/A



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