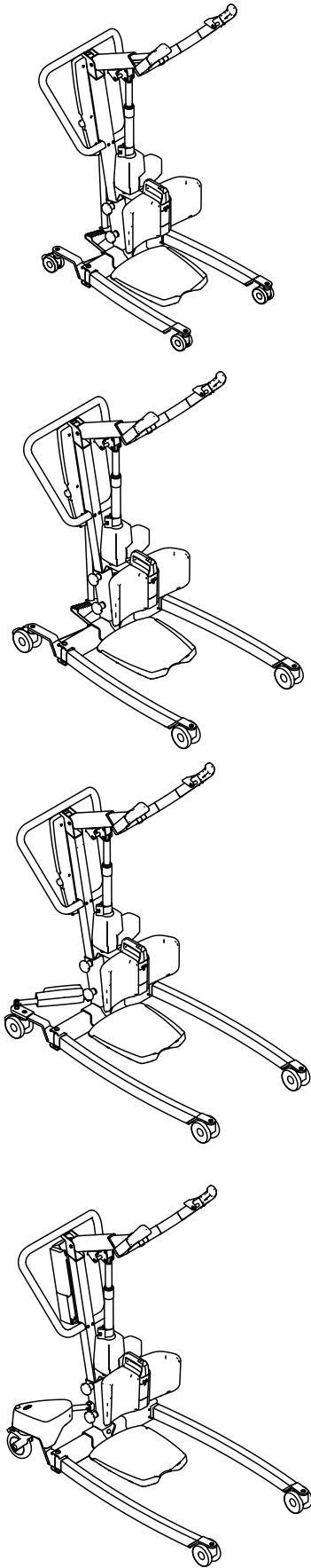


Invacare® ISA™

ISA™ COMPACT, ISA™ STANDARD
ISA™ PLUS, ISA™ XPLUS

en Stand assist patient lift
Service Manual



PROVIDER: Keep this manual.
The procedures in this manual MUST be performed by a qualified technician.



Yes, you can.®

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Contents

1 General	4
1.1 Introduction	4
1.1.1 Symbols in this Document	4
2 Safety	5
2.1 General Safety Information	5
2.2 Main parts of the lift	5
3 Servicing	7
3.1 Service Interval	7
3.1.1 LOLER Statement	7
3.2 Tightening torques	7
3.3 Resetting the service counter	7
3.4 Service inspection checklist	8
4 Troubleshooting	10
4.1 Identifying and repairing faults	10
5 Instructions	12
5.1 Replacing 75 mm castors	12
5.2 Replacing 100 mm castors	12
5.3 Replacing 125 mm castors	13
5.4 Replacing the boom with lifting arm	14
5.5 Replacing the boom actuator	15
5.6 Replacing a leg actuator without cover	16
5.7 Replacing a leg actuator with cover	17
5.8 Replacing electrical legs without actuator cover	19
5.9 Replacing electrical legs with actuator cover	20
5.10 Replacing the foot pedal and/or rods	21
5.10.1 Replacing the pedal axle	22
5.11 Replacing manual legs	23
5.12 Replacing the CBJ Home control unit	24
5.13 Replacing the CBJ Care, CBJ1 , CBJ2 control unit	25
5.14 Replacing the hand grips	26
5.15 Replacing the hooks	26
5.16 Replacing the leg support (new models)	27
5.16.1 Replacing the Spring Loaded Plunger Pin	28
5.17 Replacing the leg support	29
5.18 Replacing the shin cushions (new models)	30
5.19 Replacing the shin cushions	32
5.20 Replacing the foot plate	34
5.21 Replacing the heel block	34
5.22 Installing the lever for manual leg spreader	35
5.23 Installing the leg band	36

1 General

1.1 Introduction

This document contains important information about assembly, adjustment and advanced maintenance of the product. To ensure safety when handling the product, read this document and the user manual carefully and follow the safety instructions.

Find the user manual on Invacare's website or contact your Invacare representative. See addresses at the end of this document.

Invacare reserves the right to alter product specifications without further notice.

Before reading this document, make sure you have the latest version. You find the latest version as a PDF on the Invacare website.

For pre-sale and user information, see the user manual.

For more information about the product, for example product safety notices and product recalls, contact your Invacare representative. See addresses at the end of this document.

1.1.1 Symbols in this Document

Symbols and signal words are used in this document and apply to hazards or unsafe practices which could result in personal injury or property damage. See the information below for definitions of the signal words.

**WARNING**

Indicates a hazardous situation that could result in serious injury or death if it is not avoided.

**CAUTION**

Indicates a hazardous situation that could result in minor or slight injury if it is not avoided.

**NOTICE**

Indicates a hazardous situation that could result in damage to property if it is not avoided.

**Tips and Recommendations**

Gives useful tips, recommendations and information for efficient, trouble-free use.

2 Safety

2.1 General Safety Information


WARNING!
Risk of injury or damage to property

- The procedures in this manual must only be performed by a qualified technician.
- Use only original accessories and spare parts.
- Do not handle this product or any available optional equipment without first completely reading and understanding these instructions and any additional instructional material such as user manuals, installation manuals or instruction sheets supplied with this product or optional equipment.
- After each assembly, check that all fittings are properly tightened and that all parts have the correct function.


WARNING!
Risk of contamination

- Clean and disinfect the product before servicing.


NOTICE!

Assembly of accessories might not be described in this service manual. Refer to the manual, delivered with the accessory.

- Additional manuals can be ordered from Invacare. See addresses at the end of this document.


NOTICE!

Some replacement parts are only available as a kit. Always use the complete new kit when replacing a part.

- Spare parts can be ordered from Invacare. Refer to your local Invacare website to access the electronic spare parts catalogue (ESPC).


NOTICE!

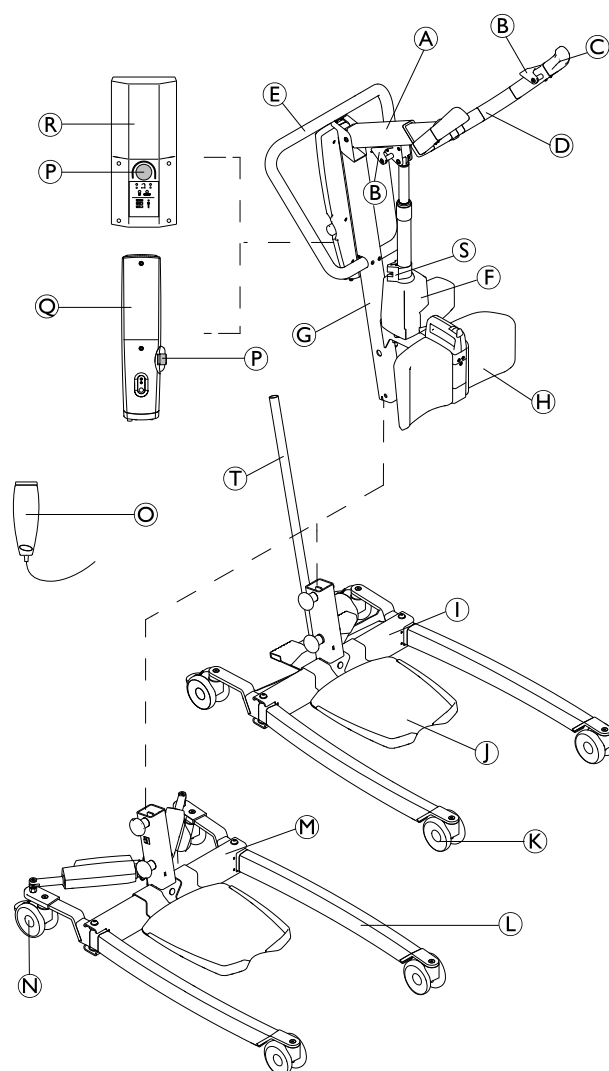
Refer to the user manual of this product for information on

- Technical data
- Product components
- Labels
- Additional safety instructions
- Cleaning and disinfection instructions



The information contained in this document is subject to change without notice.

2.2 Main parts of the lift



(A)	Boom
(B)	Hook for sling
(C)	Hand grip
(D)	Lifting arm
(E)	Push bar
(F)	Lifting actuator
(G)	Mast
(H)	Leg support (fixed or swiveling)
(I)	Base with foot pedal for manual leg spreader
(J)	Foot plate (high, low or inclined)
(K)	Front castors
(L)	Leg
(M)	Base with actuators for electrical leg spreader — with or without actuator covers
(N)	Rear castors with brake
(O)	Hand control
(P)	Emergency stop
(Q)	CBJ Home control unit with integrated battery

®	CBJ Care, CBJ1 or CBJ2 control unit with detachable battery
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Ⓢ	Mechanical emergency lowering
Ⓣ	Lever for manual leg spreader

3 Servicing

3.1 Service Interval

Unless otherwise stated in local requirements, service must be performed at least every 12 months and according to the Service Inspection Checklist. When performing annual or regular service, all parts designed to carry load must be, as a minimum, tested with maximum load. All safety features must be checked according to ISO 10535:2006 Annex B.

3.1.1 LOLER Statement

The UK Health and Safety Executive's Lifting Operations and Lifting Equipment Regulations 1998, require any equipment that is used in the workplace to lift a load be subject to safety inspection on a six monthly basis. Please refer to the HSE web site for guidance www.hse.gov.uk.

The person responsible for the equipment must ensure adherence to LOLER regulations.

3.2 Tightening torques



NOTICE!

Do not overtighten the mounting hardware as this might cause damage to the product.

If not otherwise stated in the specific instructions the following guidelines apply:

Thread	Tightening torque in Nm \pm 10%
M4	3 Nm
M5	6 Nm
M6	10 Nm
M8	25 Nm
M10	49 Nm
M12	80 Nm
M14	120 Nm
M16	180 Nm

3.3 Resetting the service counter

(CBJ Care control unit only)

To reset the service counter once you have completed a service:

1. Locate the hand control.
2. Press and hold the **UP** button and the **DOWN** button simultaneously for 5 seconds.
 - a. A sound is heard once the service counter is reset.

The service counter is now reset to indicate a service requirement after a 12 month period or 8000 cycles.




The service light switches on either after a 12 month period or 8000 cycles (whichever occurs first).




If the service counter is required to be set for a period shorter than 12 months, a special handset and further instructions are required. Contact Invacare to order this handset and instructions.

3.4 Service inspection checklist

	Model:	REF / SN number:	1/2
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! **NOTICE!**
 Corrective actions must be performed by a qualified technician.
 Instructions for replacing and adjusting main parts are described in the service manual.

Checkpoints for Invacare® ISA™ according to ISO 10535:2006 Annex B	✓	✗	Comment
General inspection			
No unauthorized modifications			
All labels present and readable. (see full list of labels in the user manual)			
Safe working load visibly marked on product label and boom			
User manual available			
Visual inspection of mechanical parts			
No wear and deformation on pivot points and bolts (leg-base connection, mast-boom connection, actuator attachments)			
All connecting elements (screws and bolts) present and properly tightened or secured			
No deformation, cracks or other damages on welded joints			
Surfaces free of damages and corrosion			
No deformation on metal structure (legs, base, mast, boom and lifting arm)			
No deformation, wear, sharp edges or other damages on the sling hooks			
No deformation or other damages on lifting arm lever, leg spreader lever and leg support release handle			
No wear or damages on hand grips and shin cushions			
Castors free of damages, debris and dirt			
Visual inspection of electrical parts			
All cables undamaged and routed properly			
No leakage on the actuator(s)			
No cracks or other damages on housings (actuators, control unit, hand control)			

	Model:	REF / SN number:	2/2
---	--------	------------------	-----

Checkpoints for Invacare® ISA™ according to ISO 10535:2006 Annex B	✓	✗	Comment
Functional tests			
Castors smoothly swivel and roll			
Application and release of castor brakes is working properly			
Base fully opens and closes smoothly			
Emergency stop engages when pressed in and all electrical functions are disabled			
Emergency stop can be reset when button is turned clockwise			
Emergency functions on the control unit (emergency lowering and if applicable emergency lifting) are working properly			
Mechanical emergency release lowers the boom at safe speed			
Successful load test (full lifting cycle with 65% of maximum safe working load suspended at the two hooks of the fully extended lifting arm) with quiet and smooth operation of the actuator			
All buttons on the control unit and hand control are working and activate the correct function			
Battery indicator and LEDs on the control unit are working properly			
Adjustment mechanism of the lifting arm is working properly (release, smooth adjustment and self locking)			
Adjustment mechanism of the leg support is working properly (release, smooth adjustment and self locking)			

Overall assessment

<input type="checkbox"/> Pass No safety or functional deficiencies were detected.	<input type="checkbox"/> Fail Safety or functional deficiencies detected and corrective action is required. Comments:
---	--

Date of next inspection: _____

Name: _____

Date / Signature: _____

4 Troubleshooting

4.1 Identifying and repairing faults

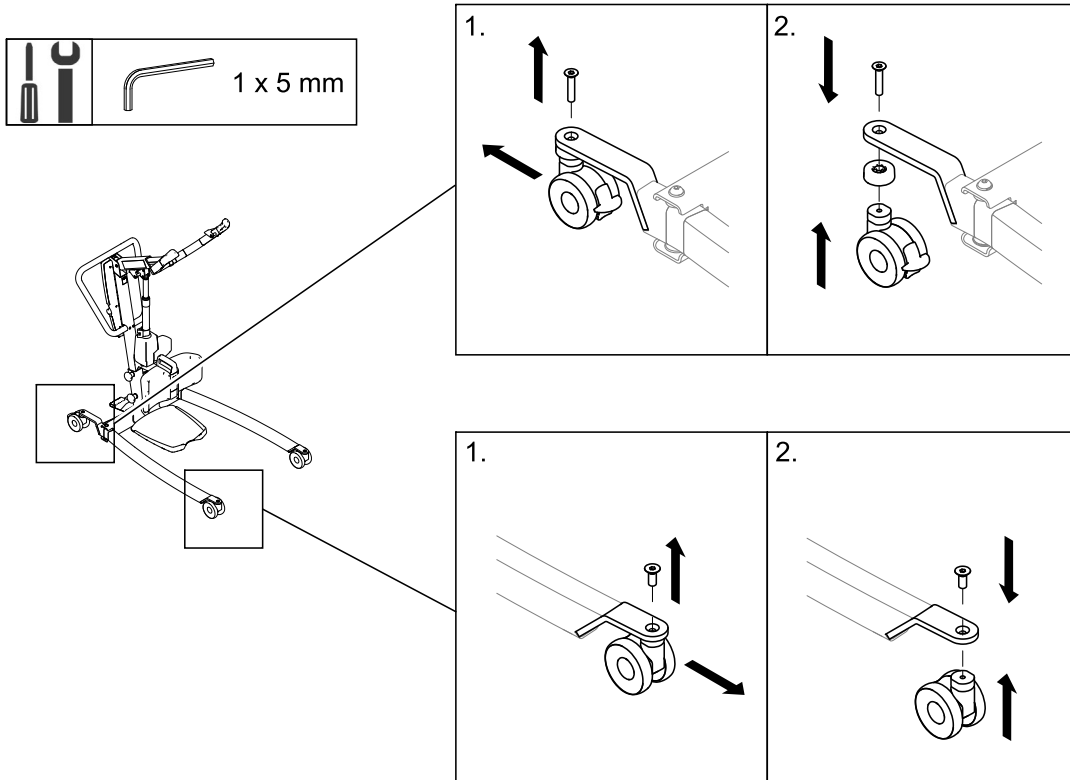
Symptoms	Faults	Solution
Patient lift feels loose	Mast/Base joint loose	Check and tighten the Mast/ Base connection. See “Installing the Mast” in the user manual
	Mast/Boom joint loose	Check and tighten the Mast/ Boom connection. See 5.4 <i>Replacing the boom with lifting arm, page 14</i>
	Manual leg spreader mechanism loose	Check and tighten the screws of the rods and/ or pedal. See 5.10 <i>Replacing the foot pedal and/or rods, page 21</i>
Castors/Brakes noisy or stiff	Fluff or debris in bearings	Clean castors from fluff and debris
	Castors / brakes are damaged	Replace the castors. See 5.1 <i>Replacing 75 mm castors, page 12</i> or 5.2 <i>Replacing 100 mm castors, page 12</i> or 5.3 <i>Replacing 125 mm castors, page 13</i>
Noisy or dry sound from pivots	Pivots are worn or damaged	Replace the pivots. See 5.4 <i>Replacing the boom with lifting arm, page 14</i> , 5.11 <i>Replacing manual legs, page 23</i> , 5.8 <i>Replacing electrical legs without actuator cover, page 19</i> or 5.9 <i>Replacing electrical legs with actuator cover, page 20</i>
Electric actuator fails to raise or lower the boom or legs fail to open or close when button is pressed	Hand-control or actuator connector loose	Connect hand control or actuator connector. Ensure connectors are seated properly and fully connected
	Battery low	Charge batteries. See “Charging the battery” in the user manual
	RED emergency stop button pressed IN	Rotate RED emergency stop button CLOCKWISE until it pops out
	Battery not connected properly to control unit	Reconnect the battery to the control unit. See “Charging the battery” in the user manual
	The connecting terminals are damaged	Replace the hand control and/or control unit. See 5.12 <i>Replacing the CBJ Home control unit, page 24</i> or 5.13 <i>Replacing the CBJ Care, CBJ1 , CBJ2 control unit, page 25</i>
	Power cord connected to power outlet	Disconnect power cord from power outlet
	Boom or leg actuator is worn or damaged or spindle is bent	Replace the actuator. See 5.5 <i>Replacing the boom actuator, page 15</i> , 5.6 <i>Replacing a leg actuator without cover, page 16</i> or 5.7 <i>Replacing a leg actuator with cover, page 17</i>
Unusual noise from actuator	Boom or leg actuator is worn or damaged or spindle is bent	Replace the actuator. See 5.5 <i>Replacing the boom actuator, page 15</i> , 5.6 <i>Replacing a leg actuator without cover, page 16</i> or 5.7 <i>Replacing a leg actuator with cover, page 17</i>
Boom will not lower in uppermost position	Boom requires a minimum weight load to lower from the uppermost position	Pull down slightly on the boom

Symptoms	Faults	Solution
Boom will not lower during a power retraction	Shoulder bolt at the junction of the boom and mast may not be properly installed	Check Mast/ Boom connection. See <i>5.4 Replacing the boom with lifting arm, page 14</i>
The control unit emits a beeping sound during lifting, and the motor stops	Max. load is exceeded	Reduce the load (and the lift will function normally)
Manual legs fail to open with the pedal or lever	The mechanical mechanism is damaged	Replace foot pedal and/or rods. See <i>5.10 Replacing the foot pedal and/or rods, page 21</i>
Lifting arm can not be adjusted	The adjustment mechanism is damaged	Replace the boom and lifting arm. See <i>5.4 Replacing the boom with lifting arm, page 14</i>
Leg support can not be installed or adjusted	Leg band is clogging the back of the leg support	Clear the back of the leg support
	The adjustment mechanism is damaged	Replace the leg support. See <i>5.17 Replacing the leg support, page 29</i>

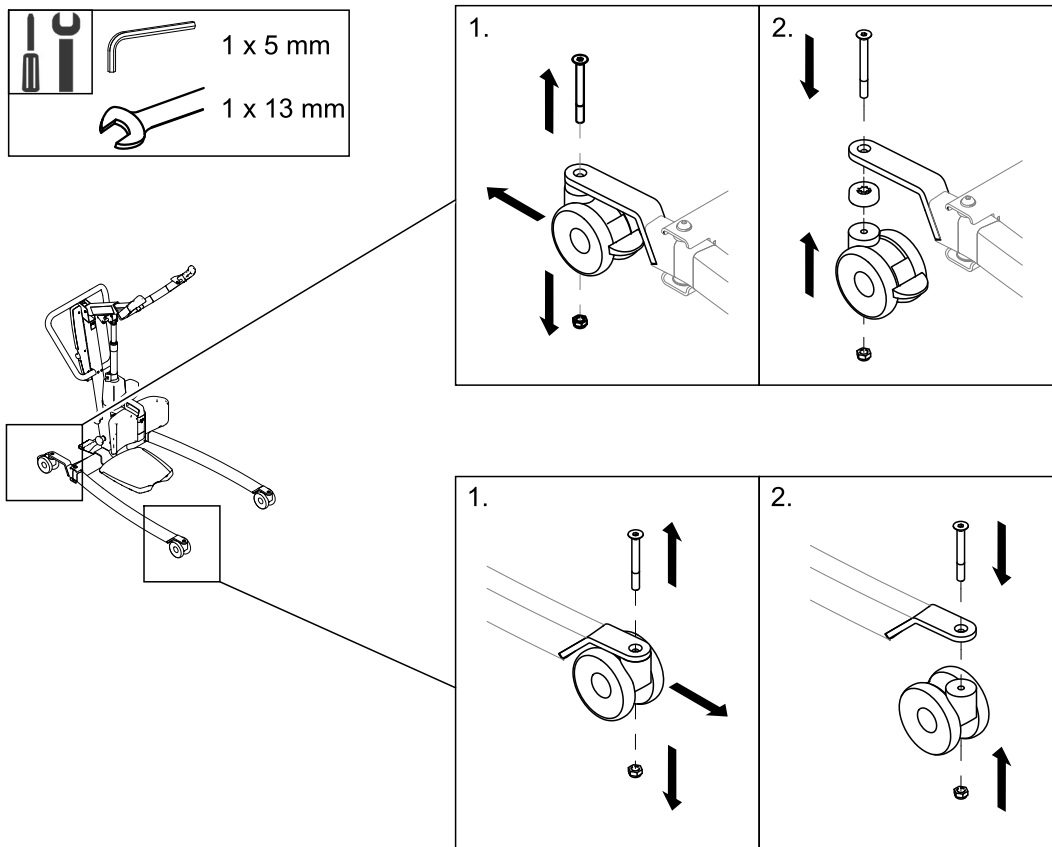
 Contact your Invacare provider or representative if the above does not solve your problems.

5 Instructions

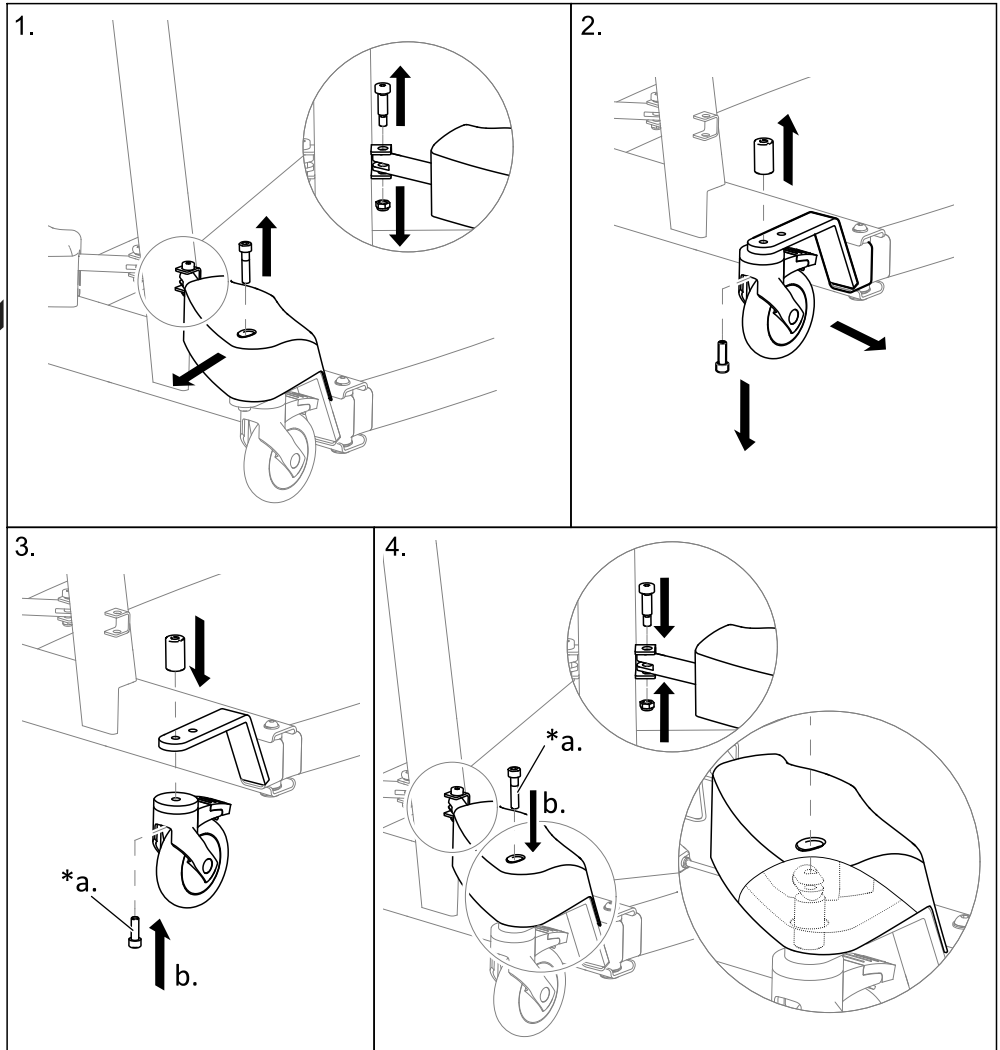
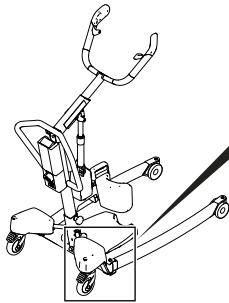
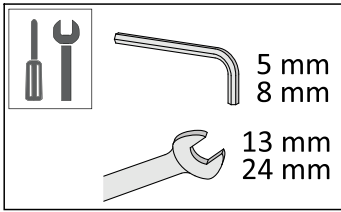
5.1 Replacing 75 mm castors



5.2 Replacing 100 mm castors

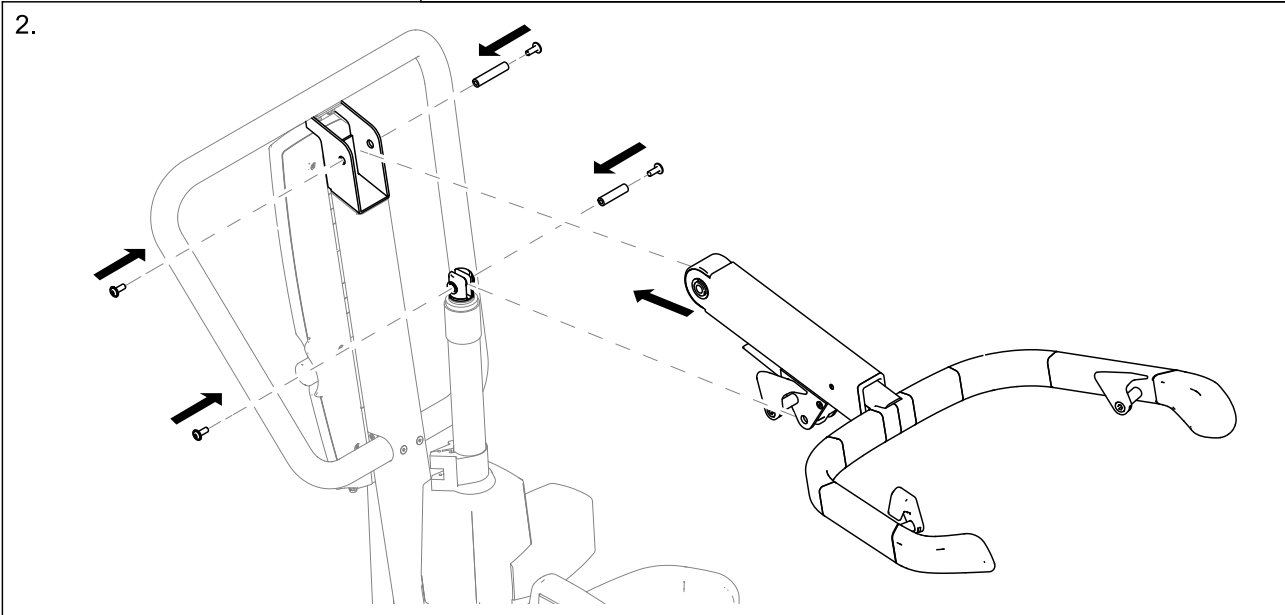
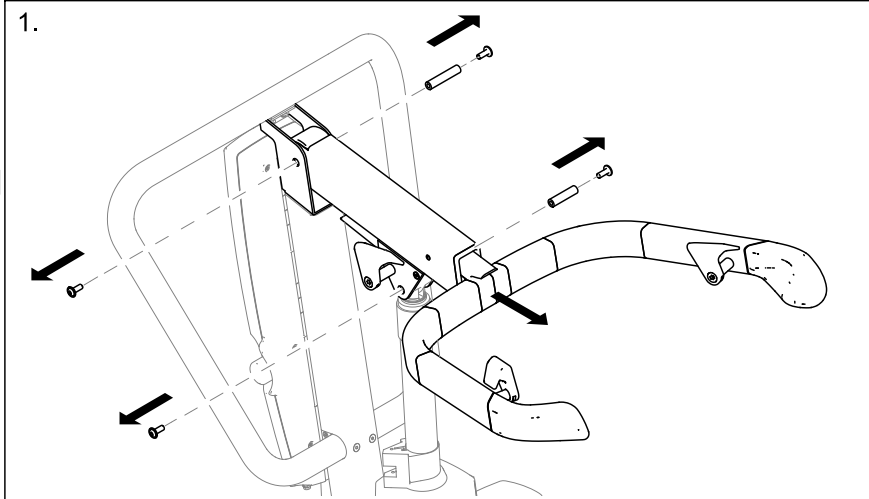
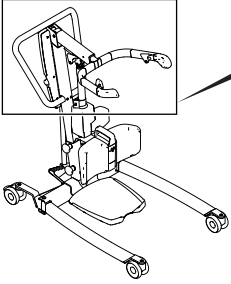
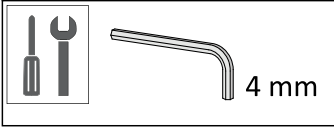


5.3 Replacing 125 mm castors

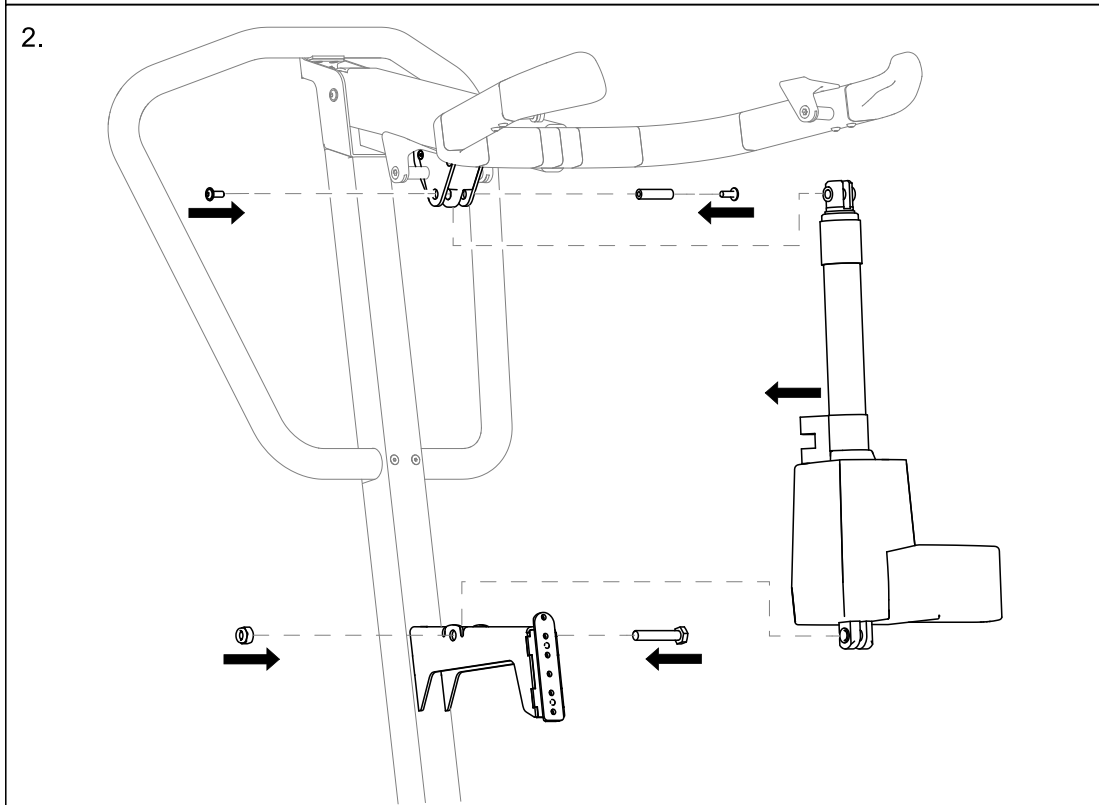
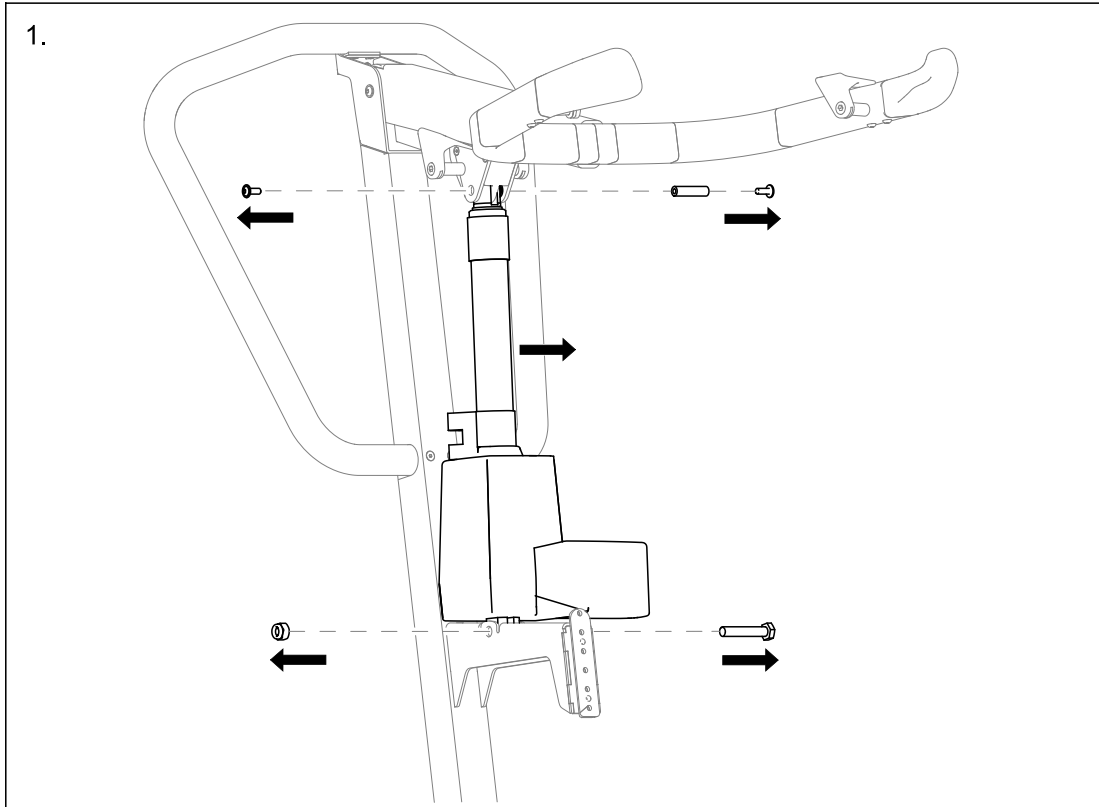
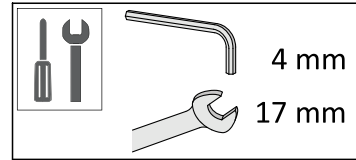
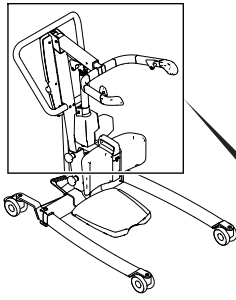


*a. Apply medium strength thread lock.

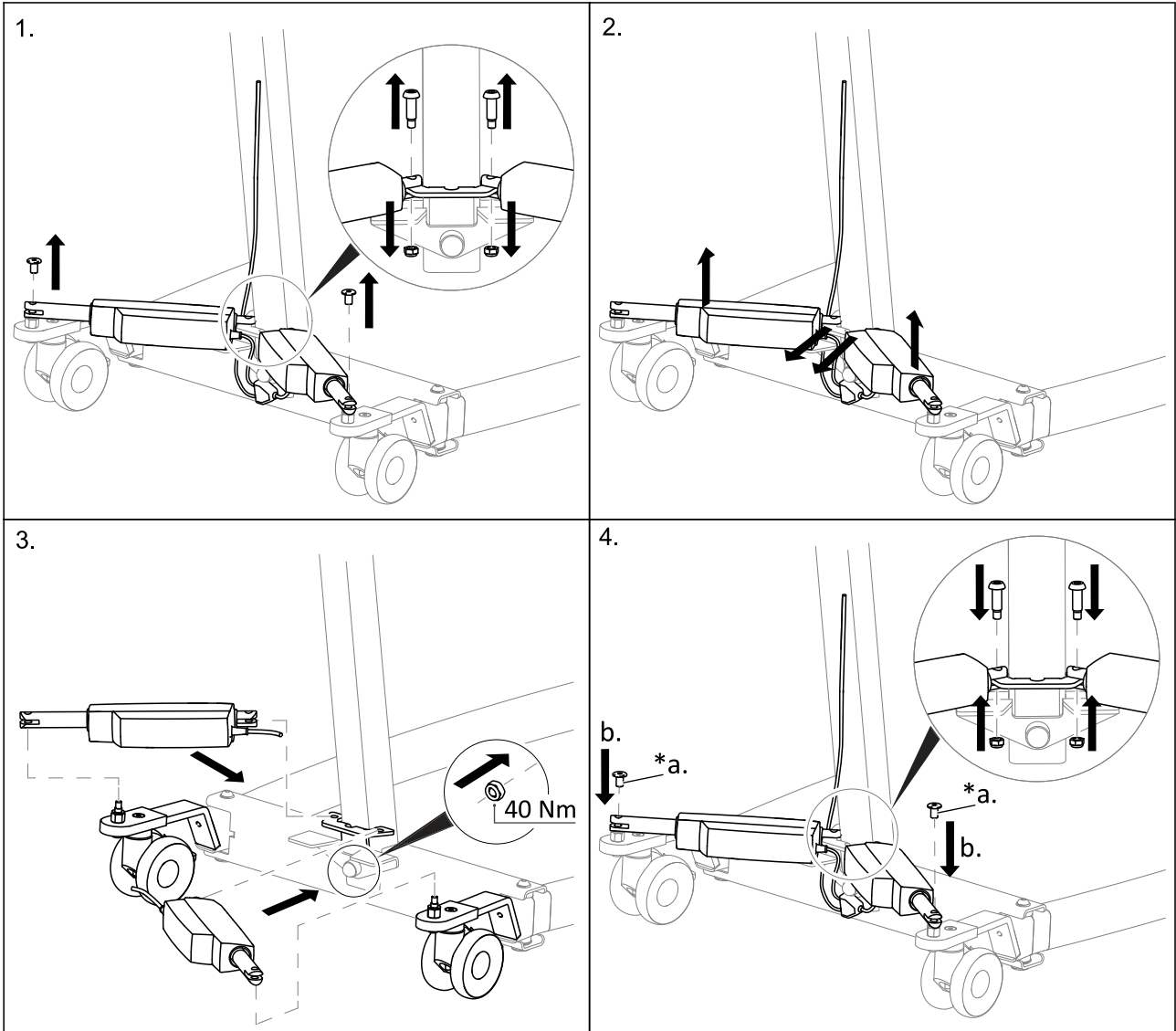
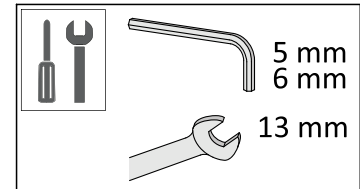
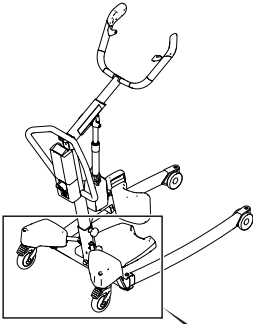
5.4 Replacing the boom with lifting arm



5.5 Replacing the boom actuator

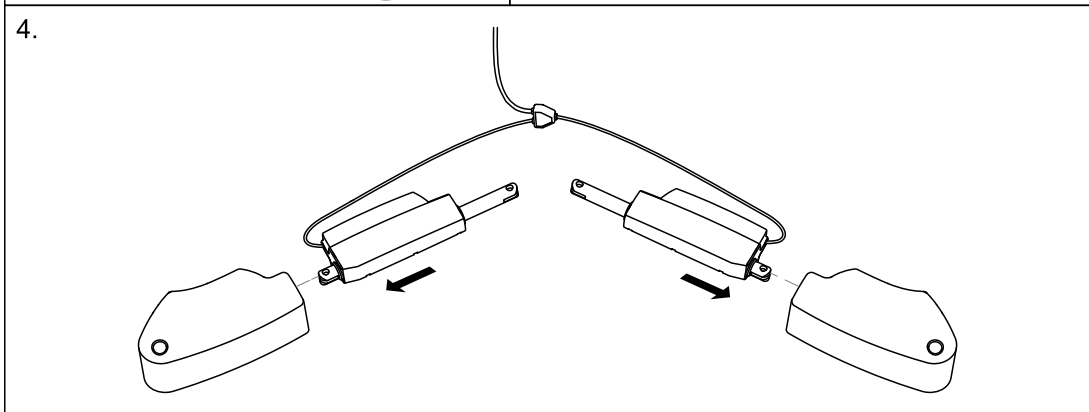
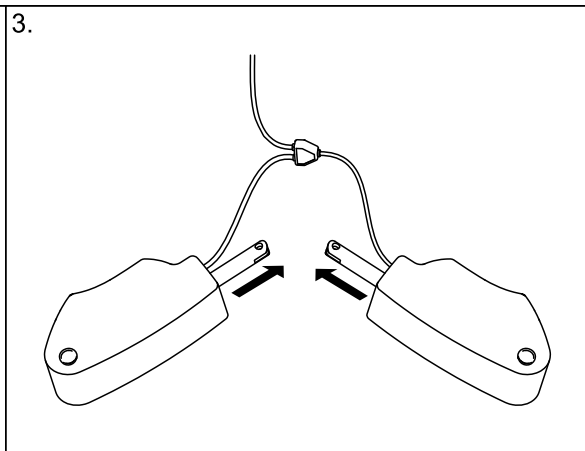
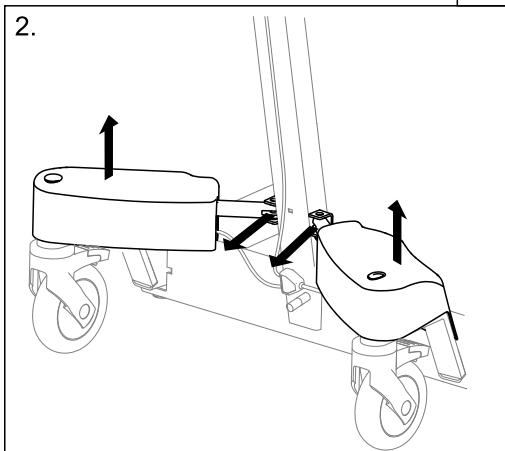
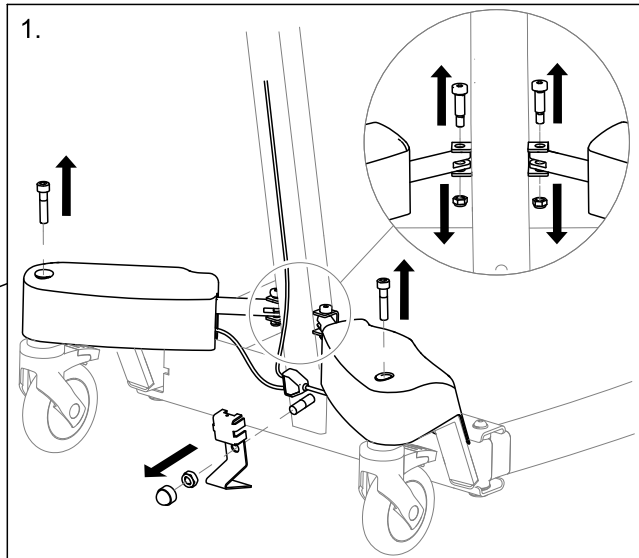
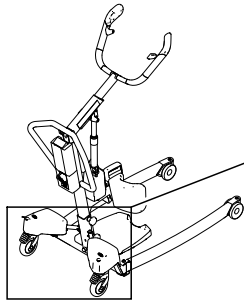
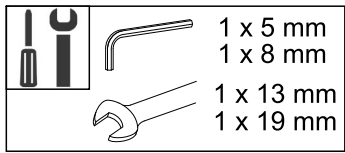


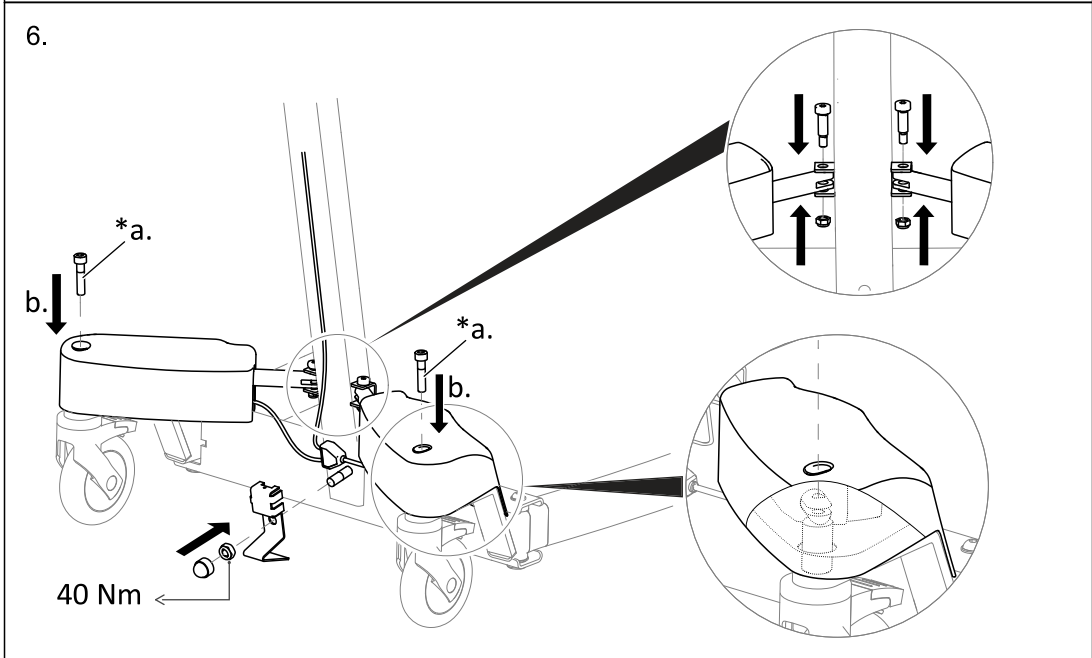
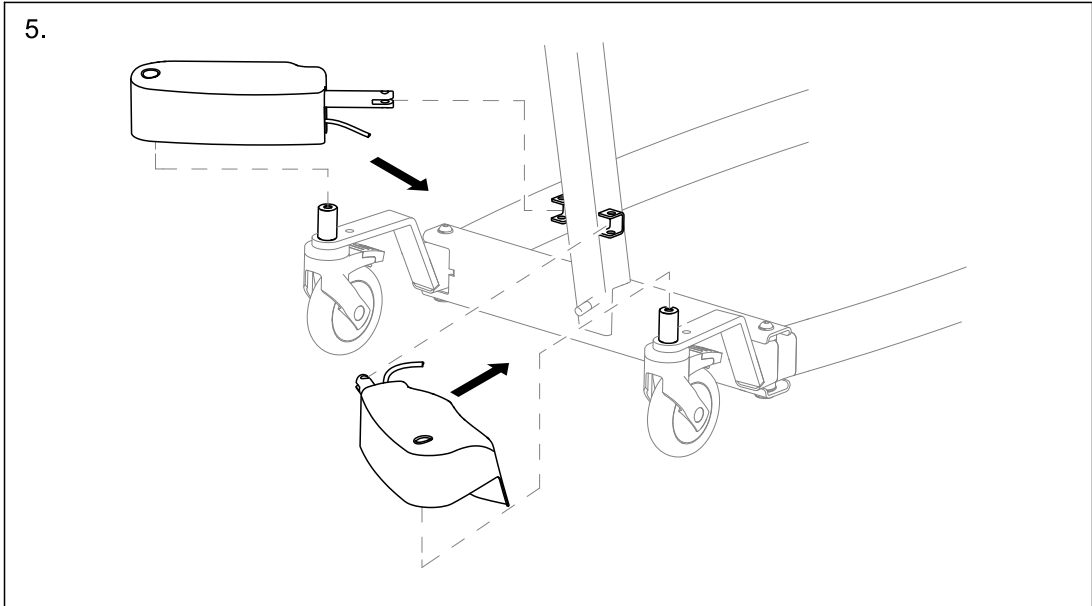
5.6 Replacing a leg actuator without cover



*a. Apply medium strength thread lock.

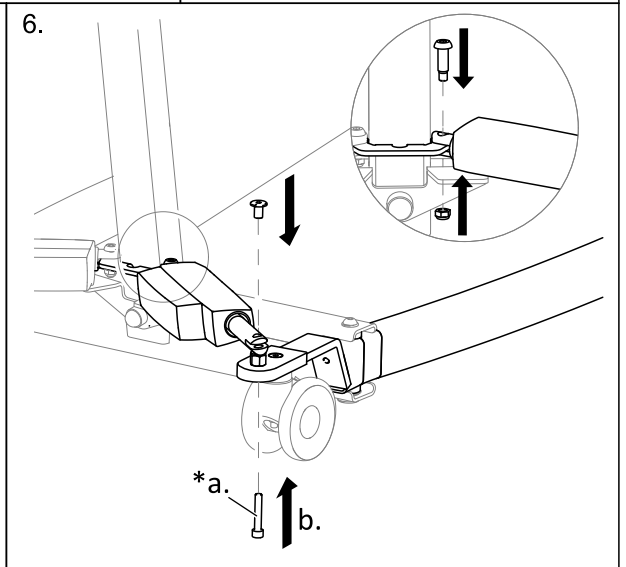
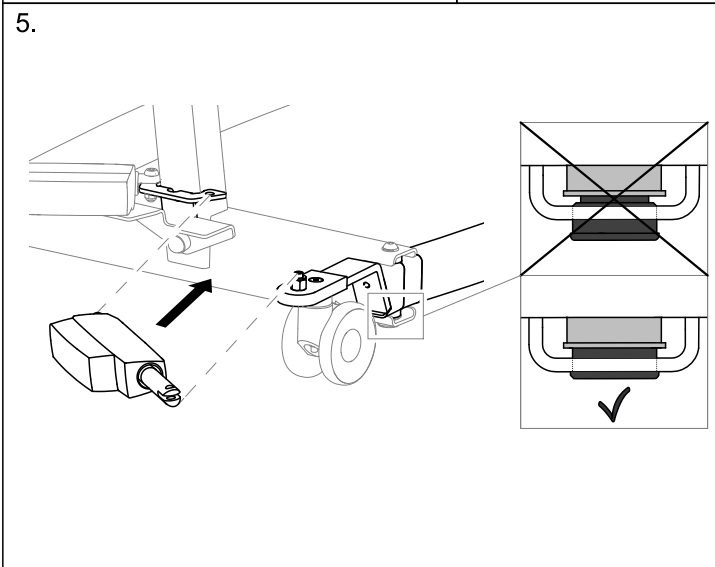
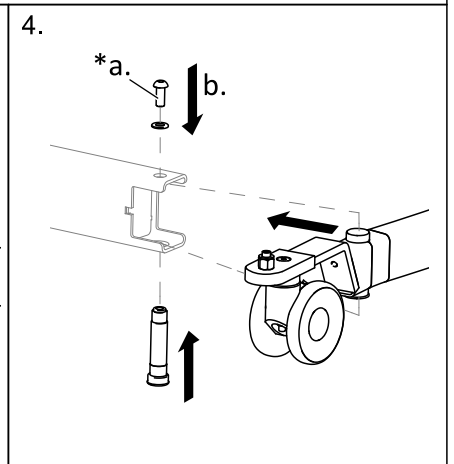
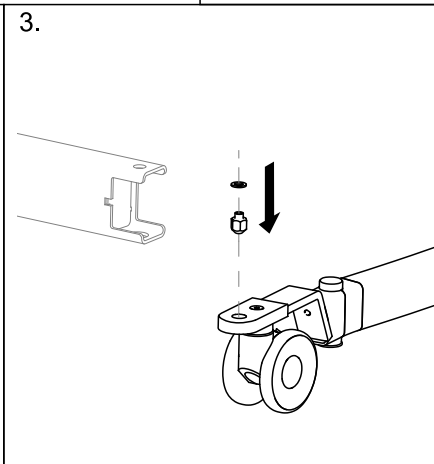
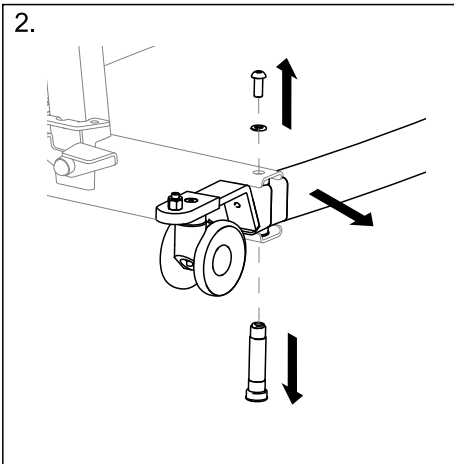
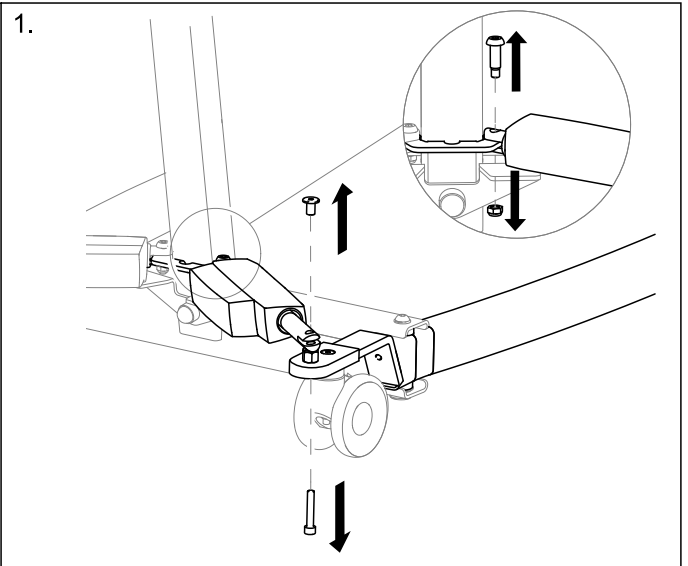
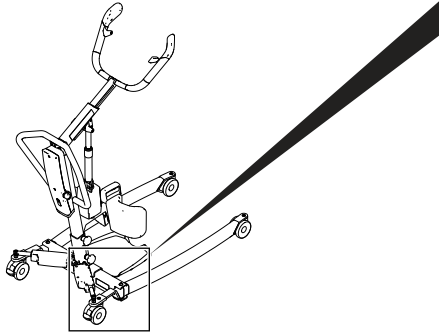
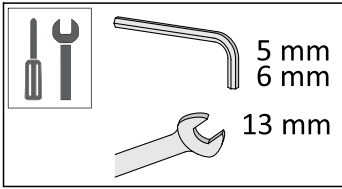
5.7 Replacing a leg actuator with cover





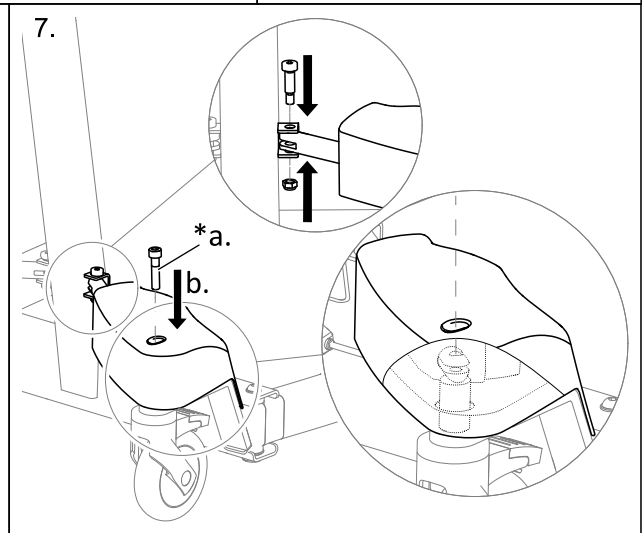
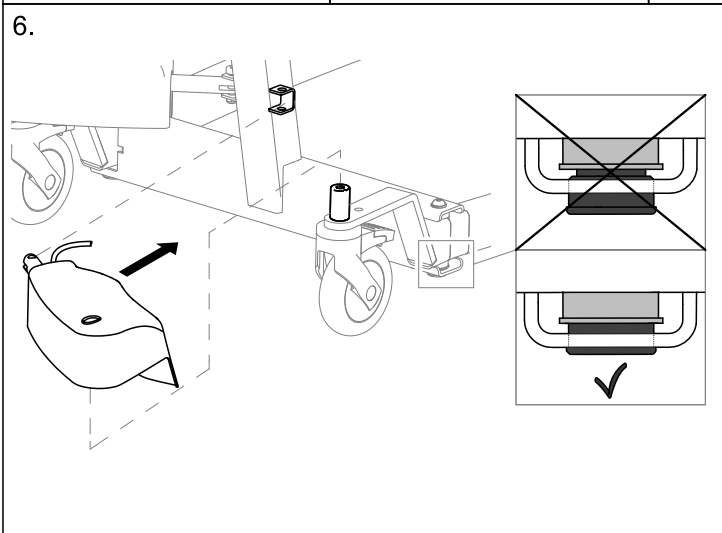
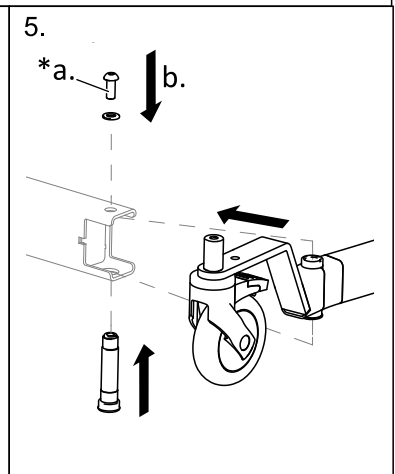
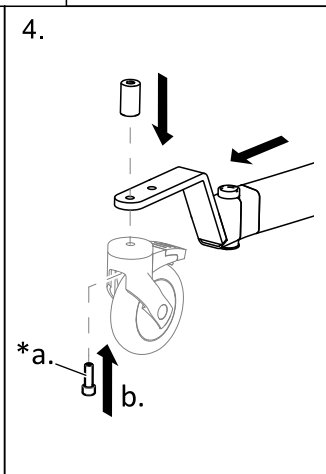
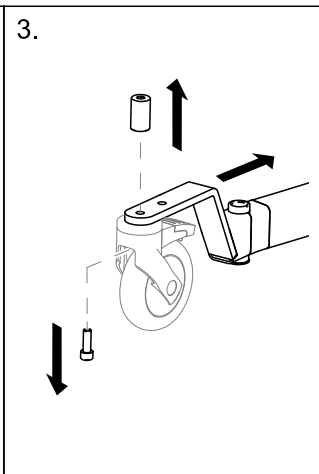
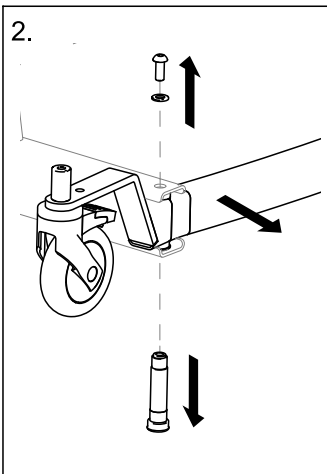
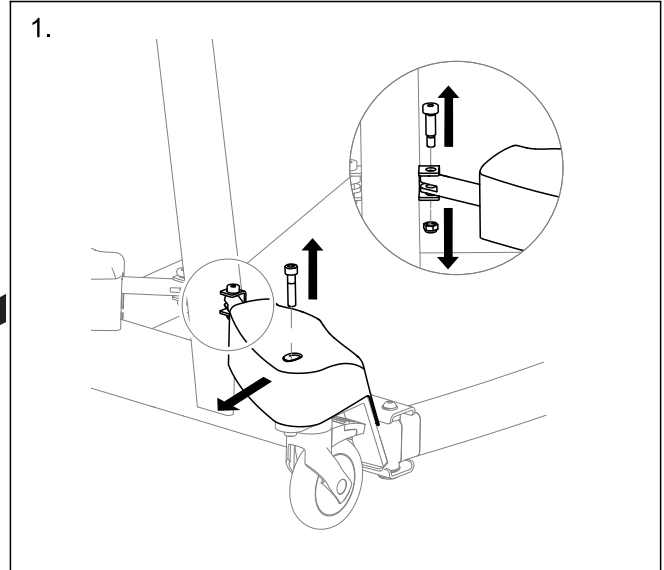
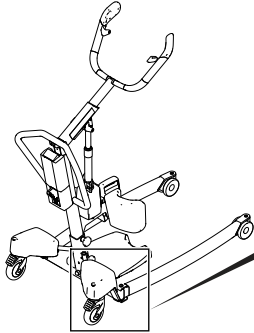
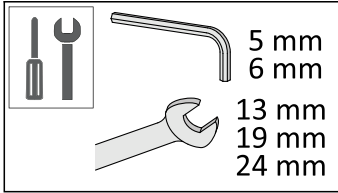
*a. Apply medium strength thread lock.

5.8 Replacing electrical legs without actuator cover



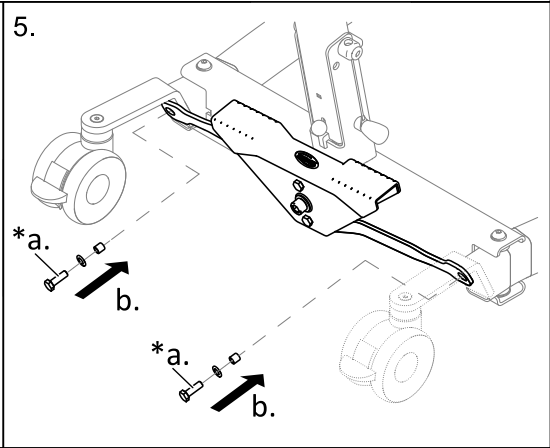
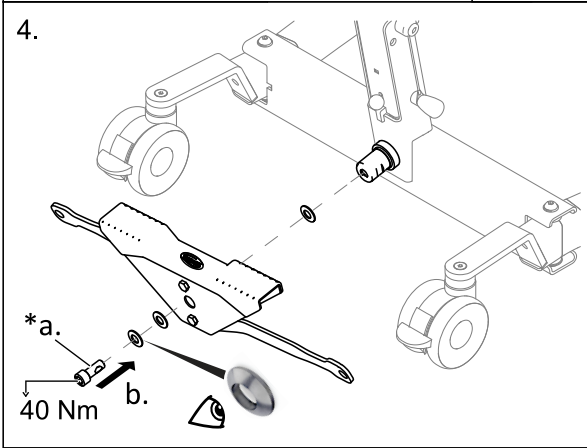
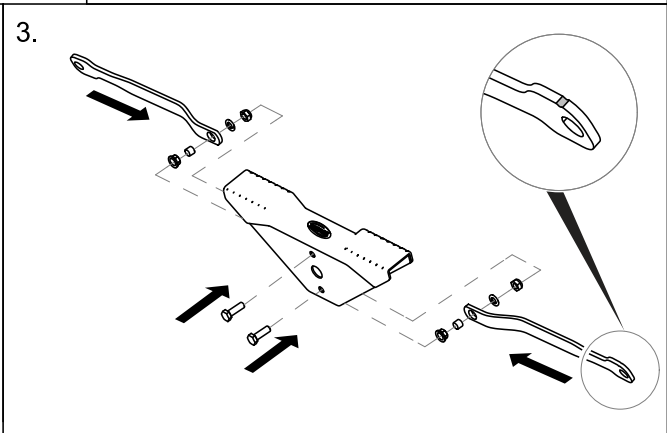
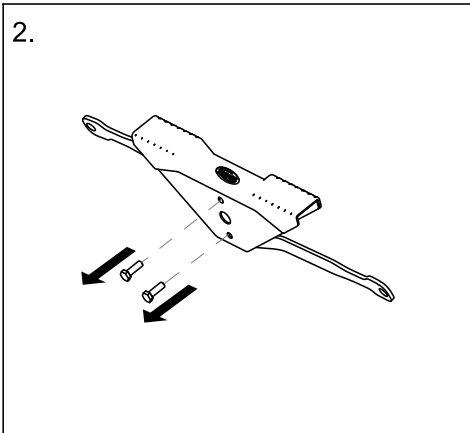
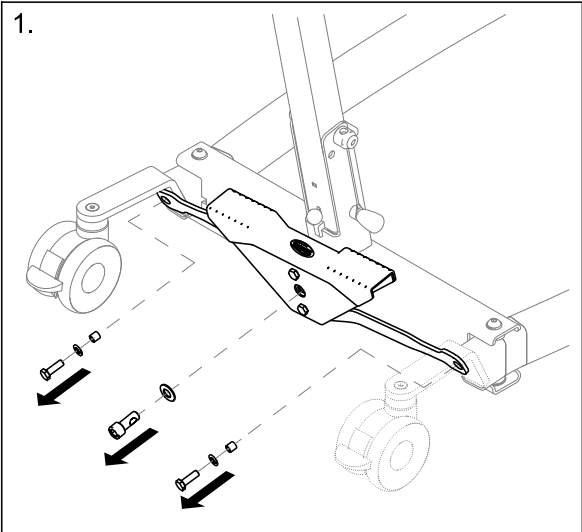
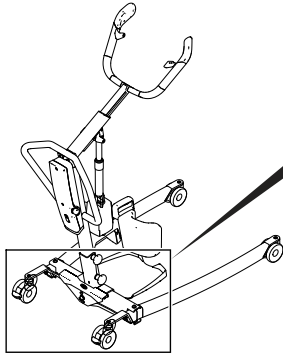
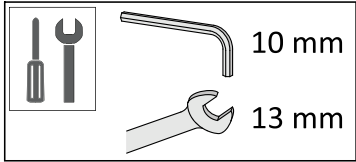
*a. Apply medium strength thread lock.

5.9 Replacing electrical legs with actuator cover



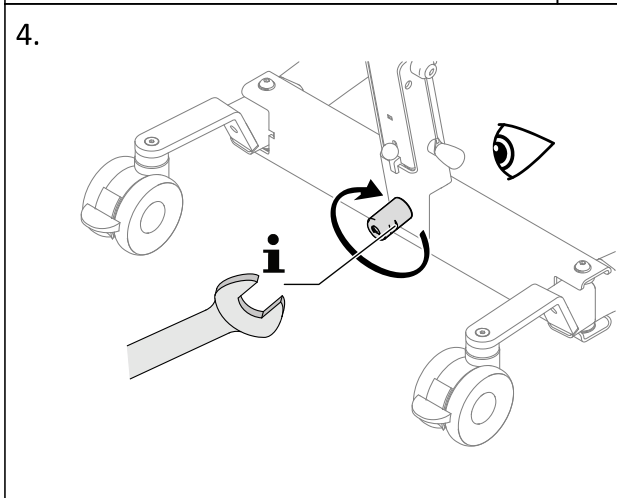
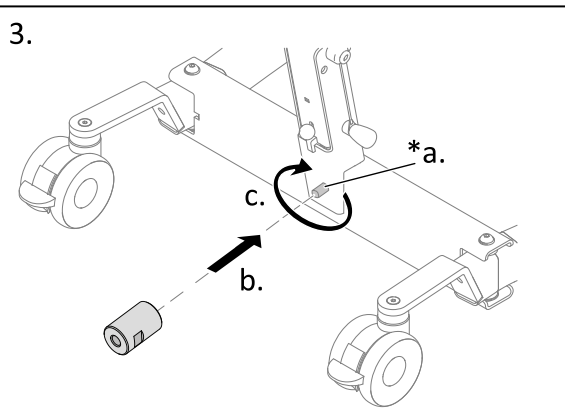
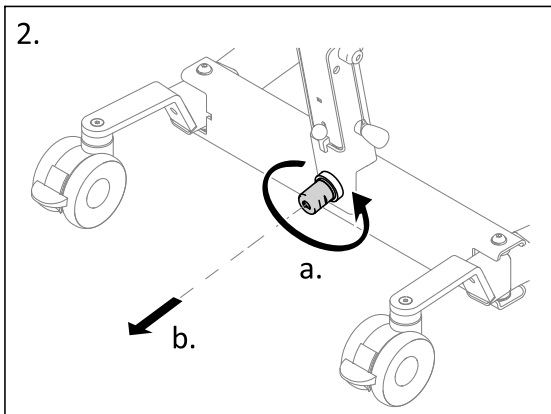
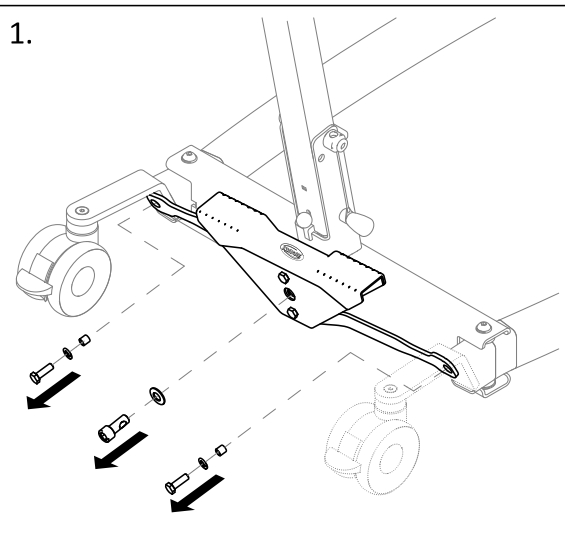
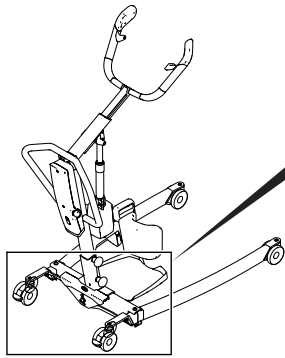
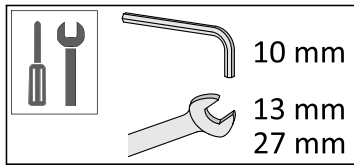
*a. Apply medium strength thread lock.

5.10 Replacing the foot pedal and/or rods



*a. Apply medium strength thread lock.

5.10.1 Replacing the pedal axle

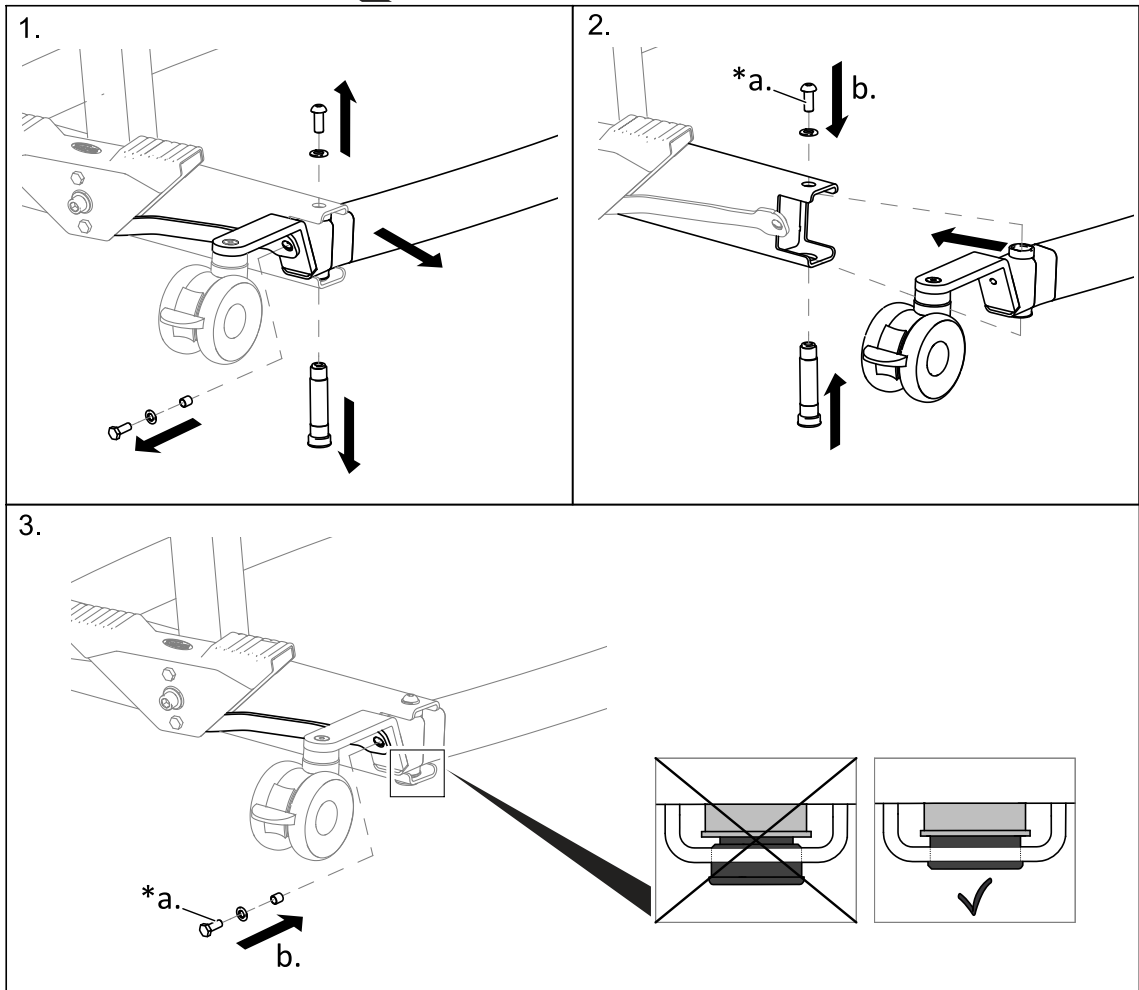
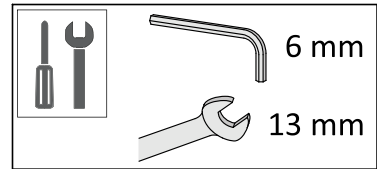
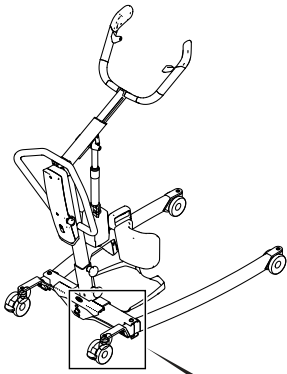


i

40 Nm	80 Nm

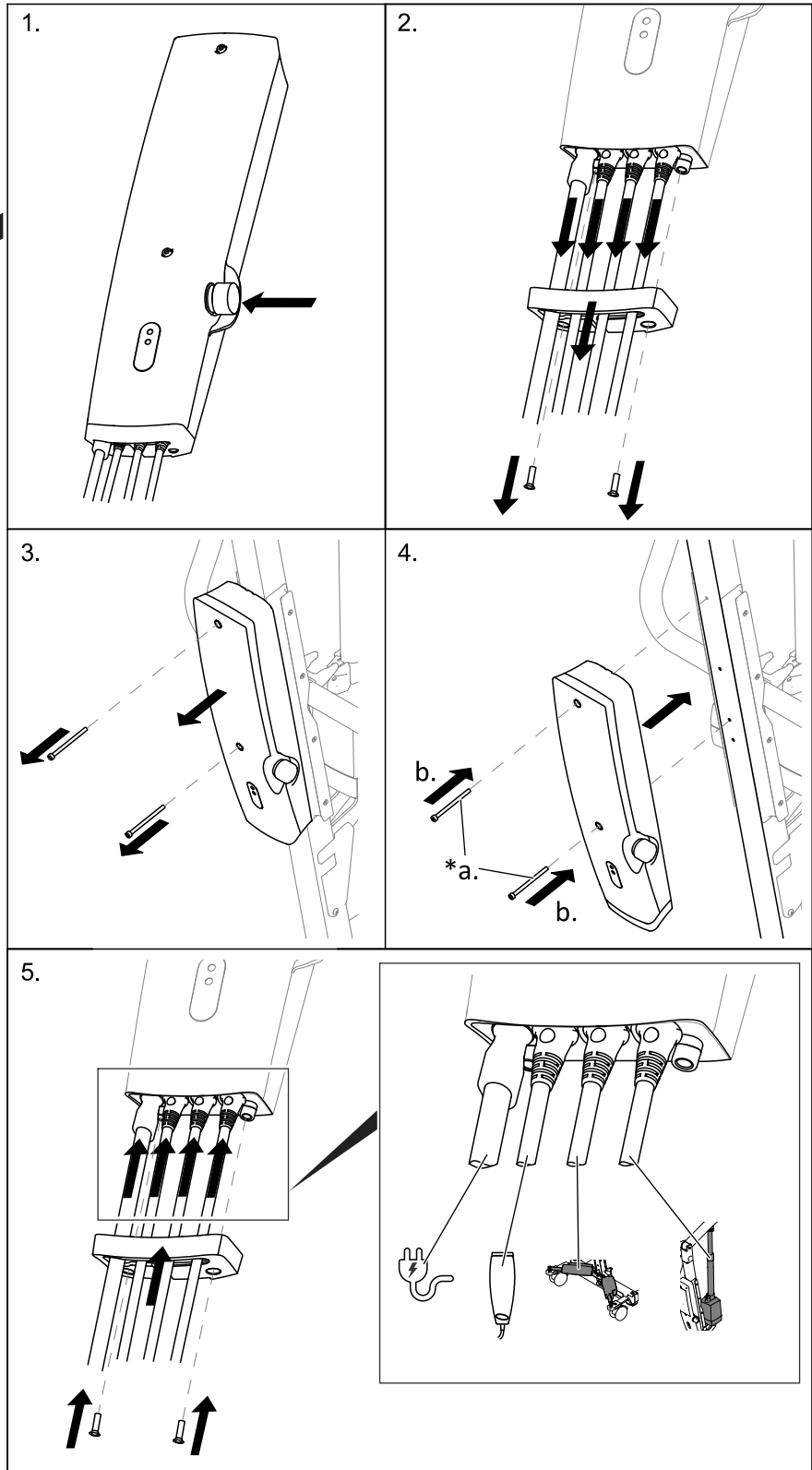
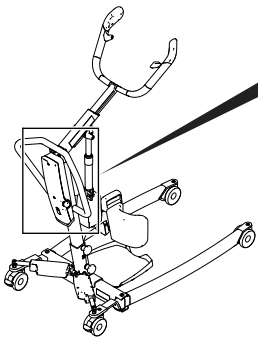
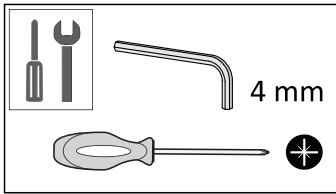
*a. Apply medium strength thread lock.

5.11 Replacing manual legs



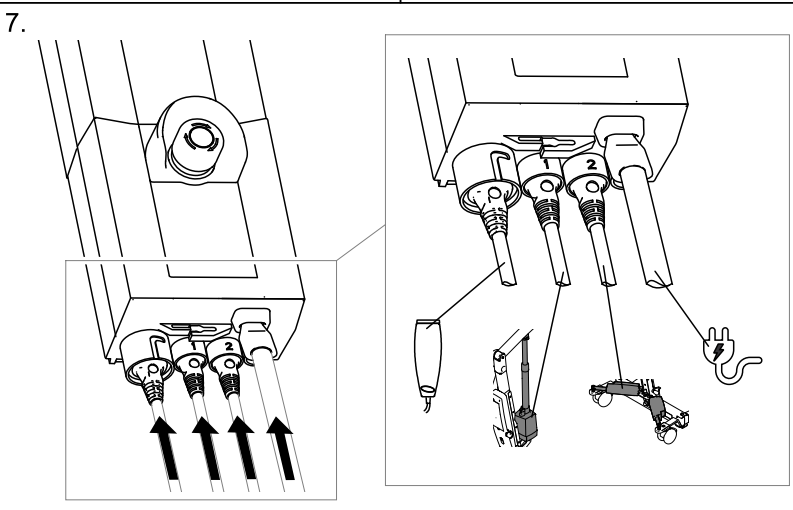
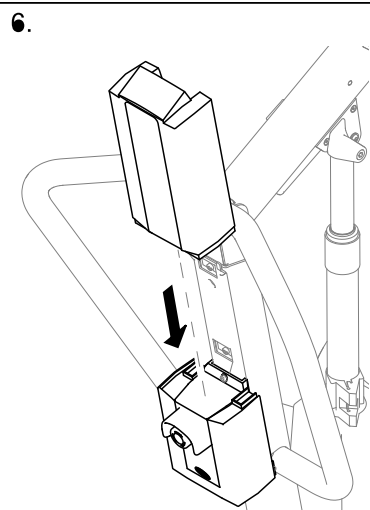
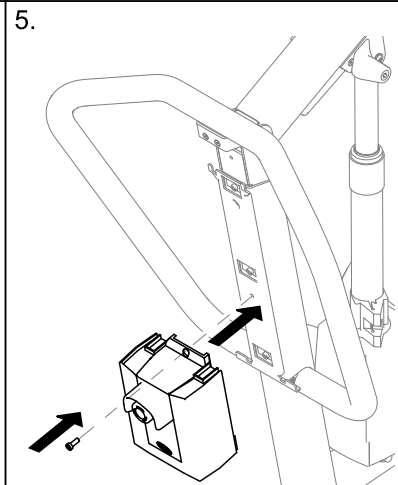
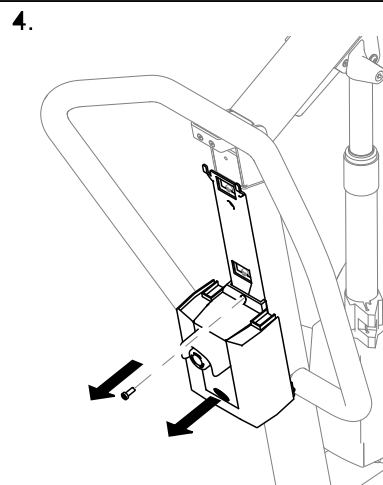
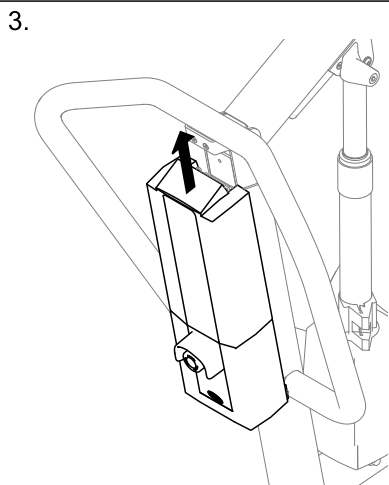
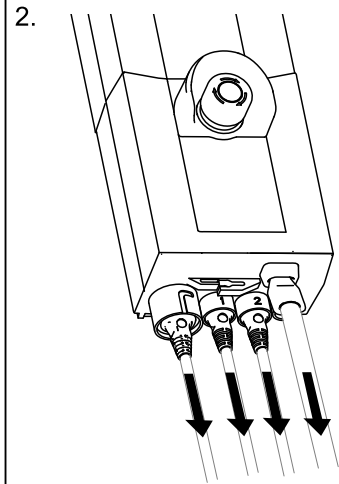
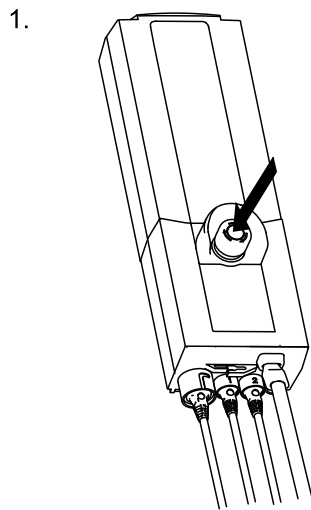
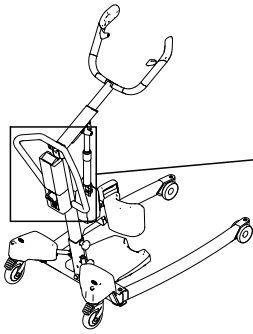
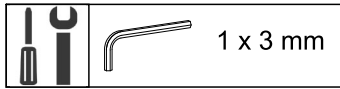
*a. Apply medium strength thread lock.

5.12 Replacing the CBJ Home control unit

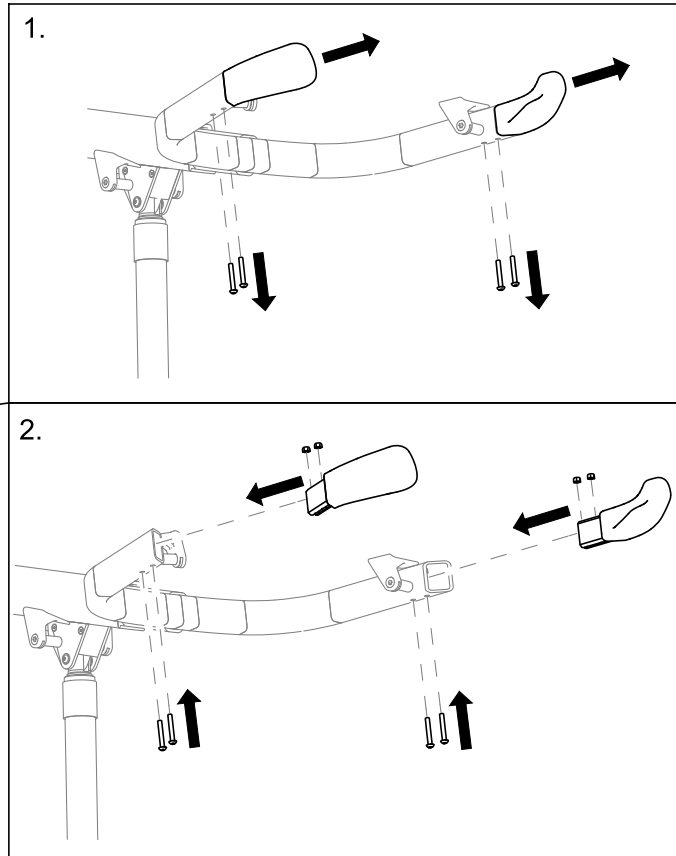
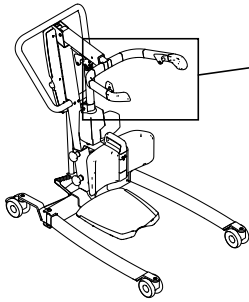
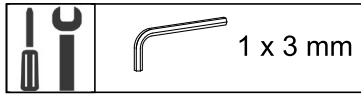


*a. Apply medium strength thread lock.

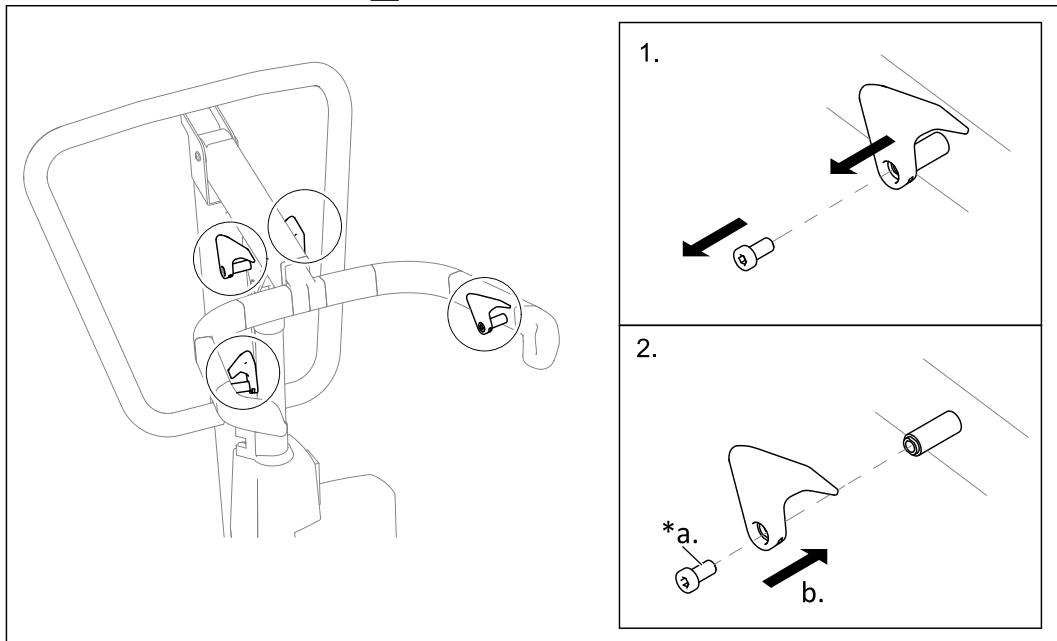
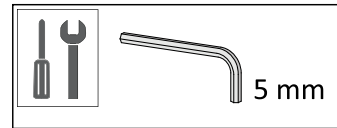
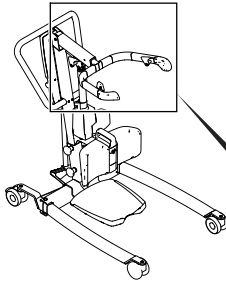
5.13 Replacing the CBJ Care, CBJ1 , CBJ2 control unit



5.14 Replacing the hand grips

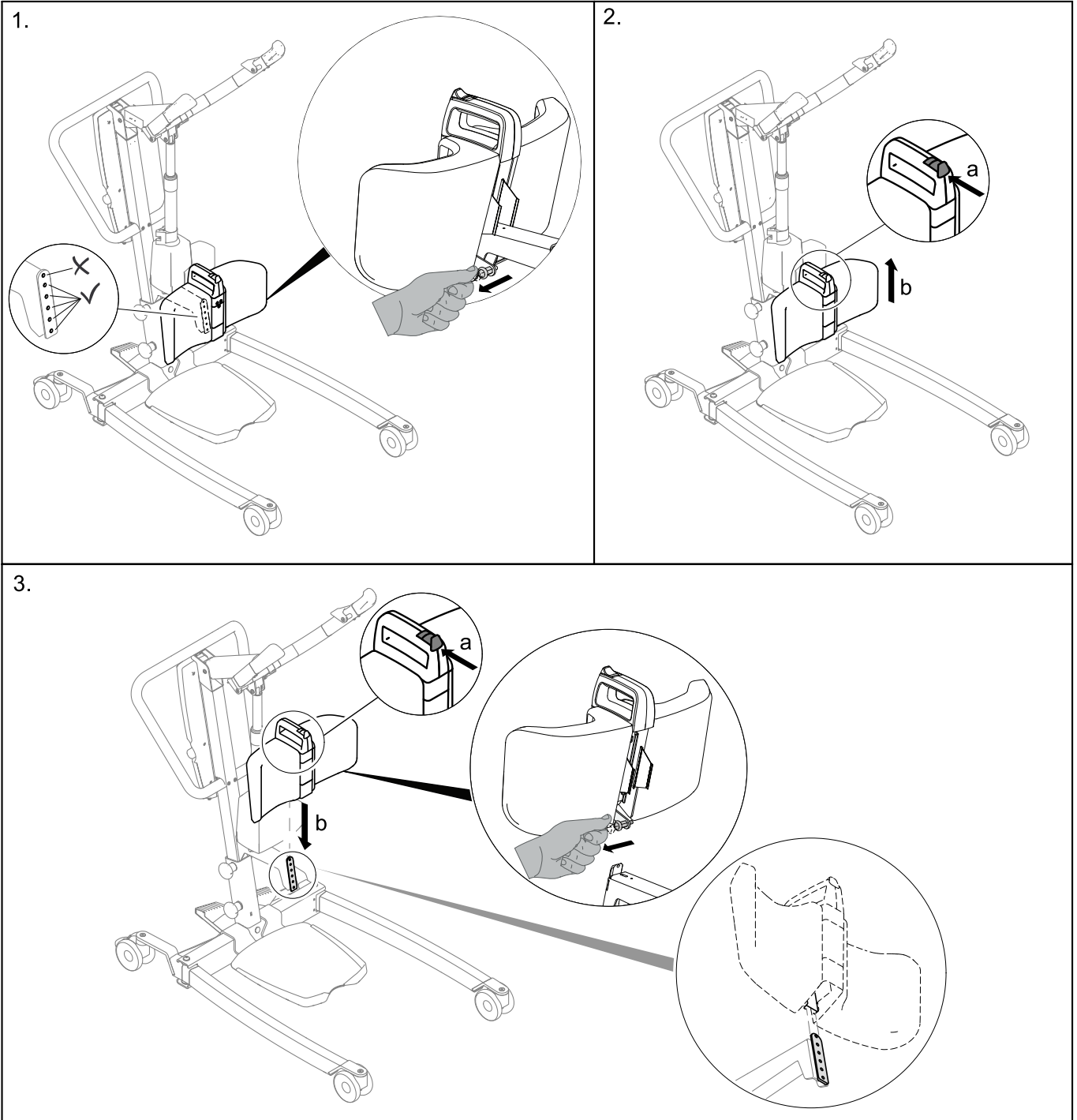
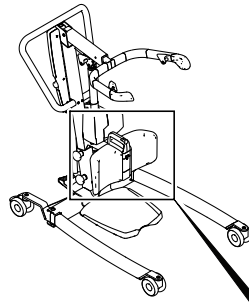


5.15 Replacing the hooks

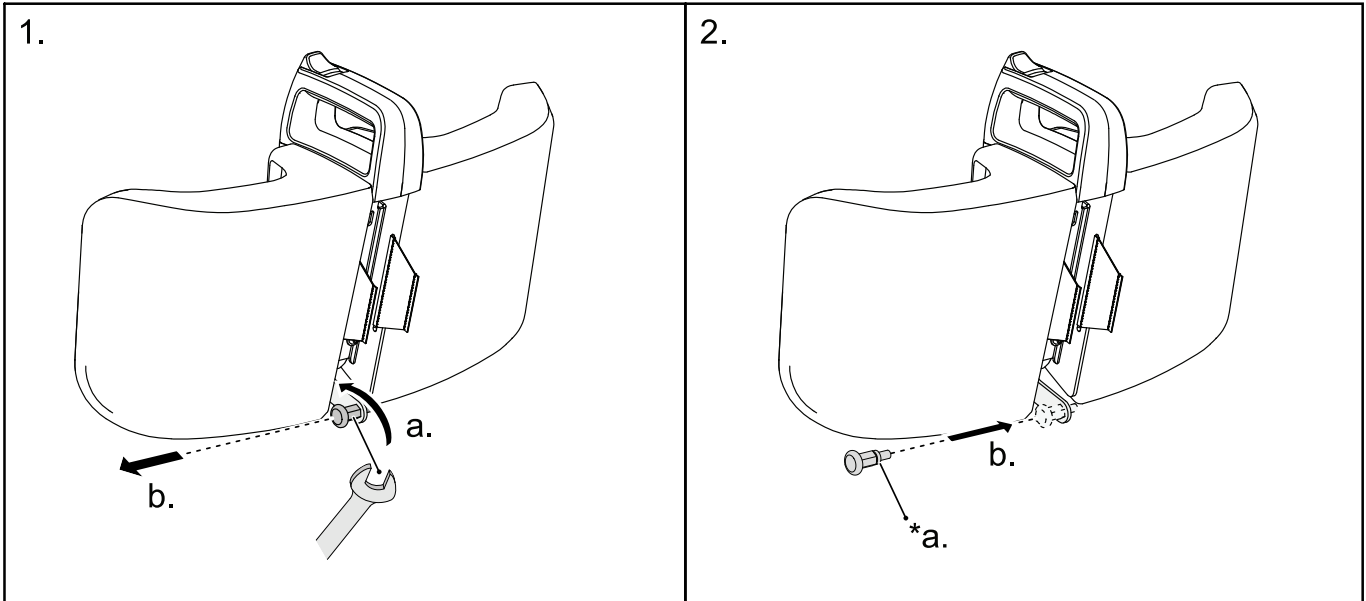
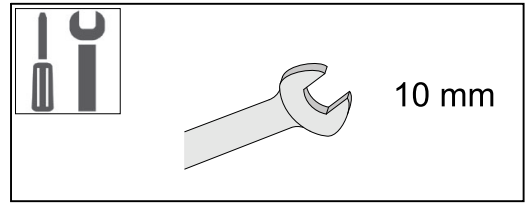
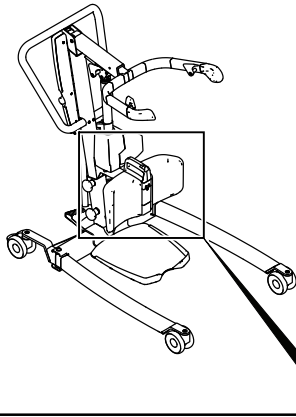


*a. Apply medium strength thread lock.

5.16 Replacing the leg support (new models)

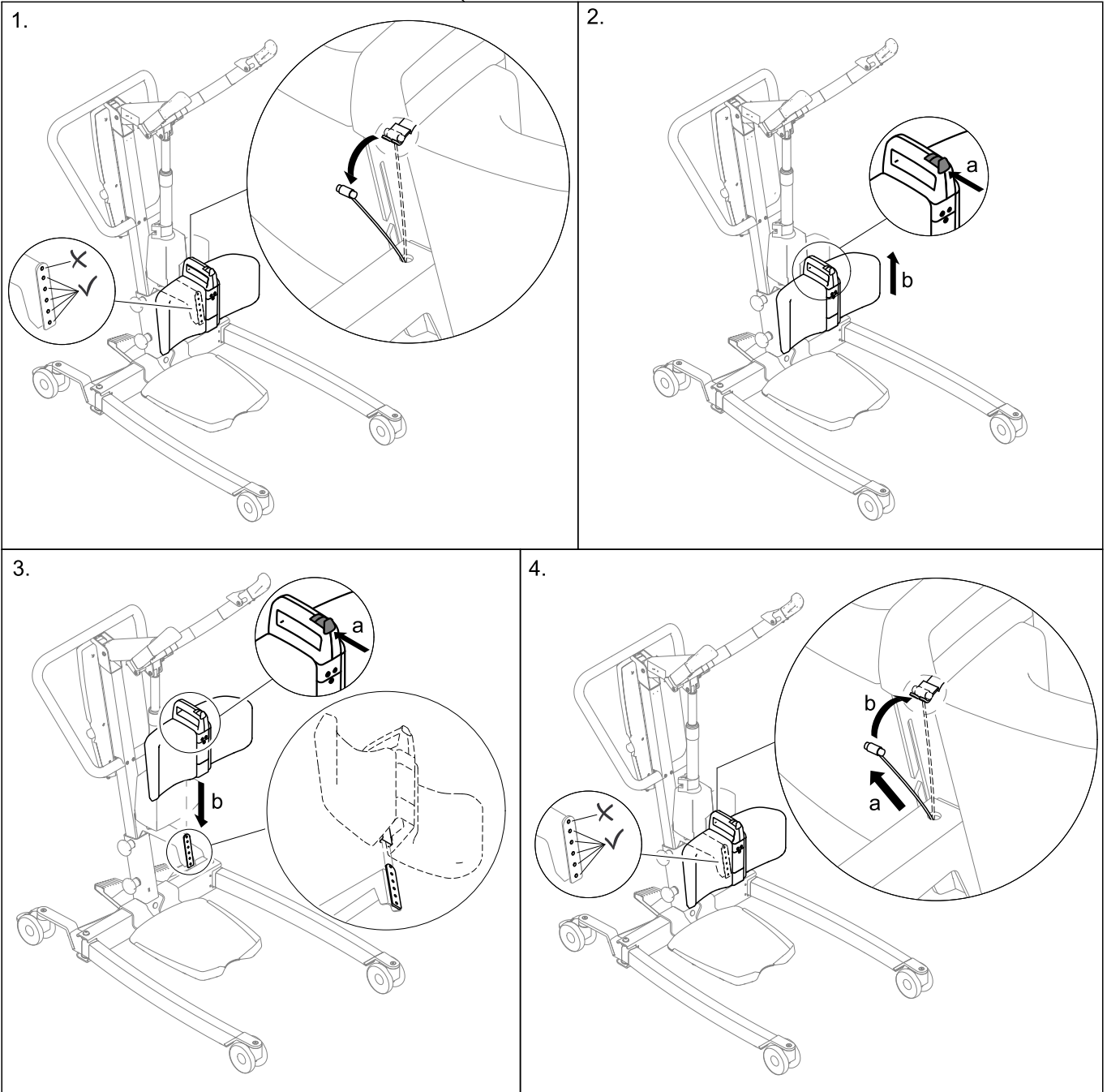
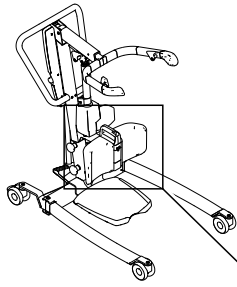


5.16.1 Replacing the Spring Loaded Plunger Pin

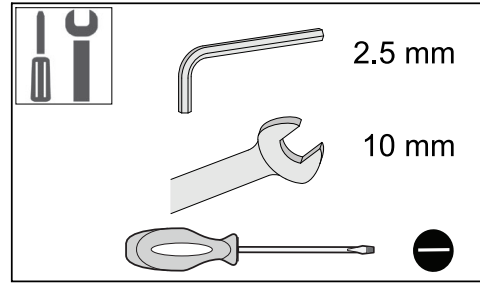
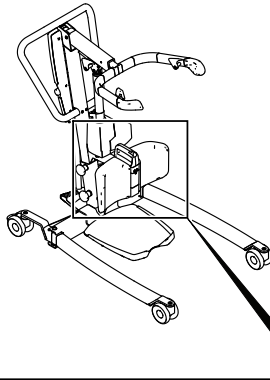


*2a. Apply thread lock.

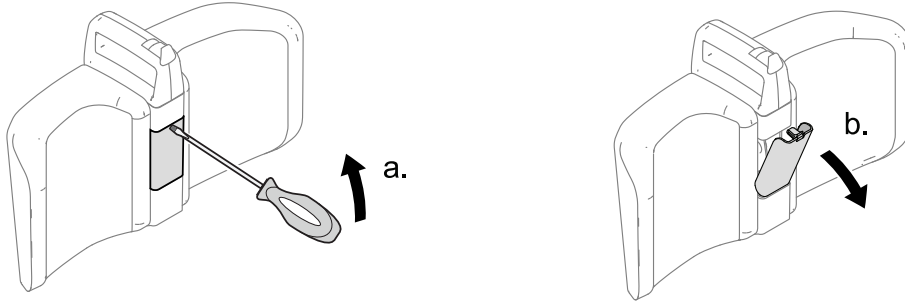
5.17 Replacing the leg support



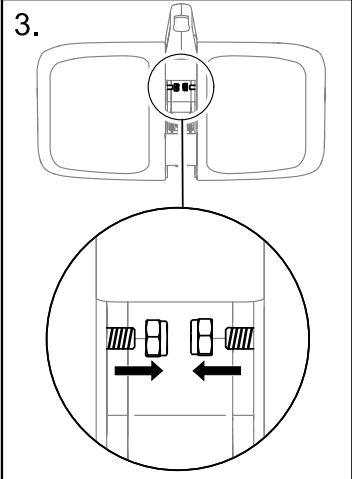
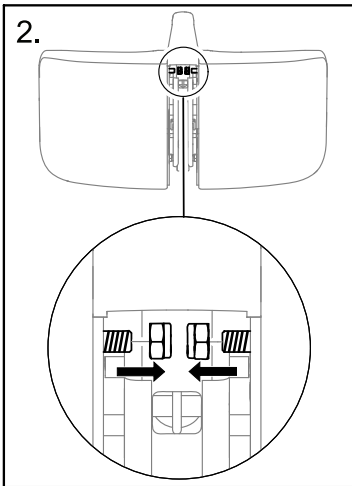
5.18 Replacing the shin cushions (new models)



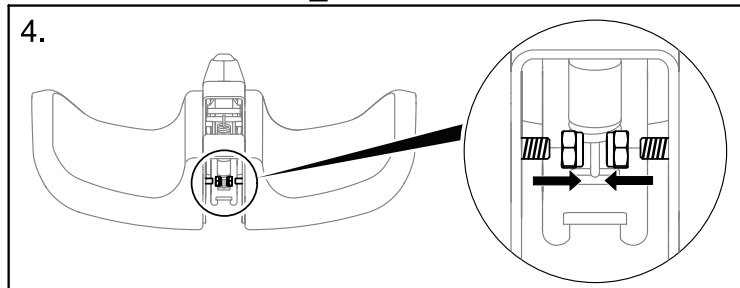
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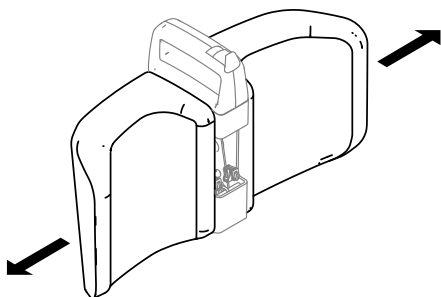
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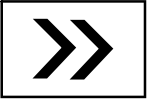


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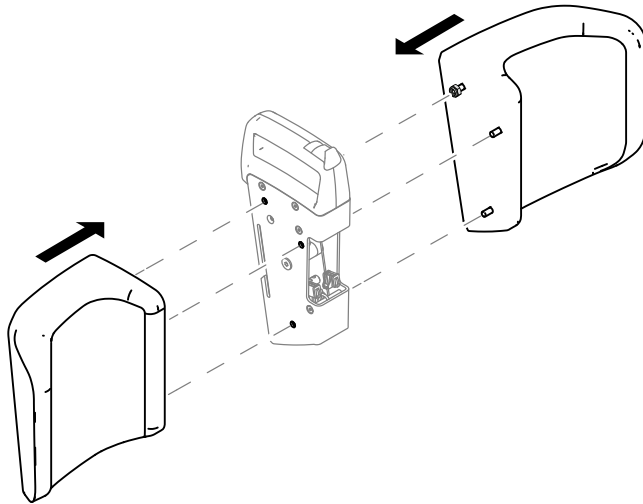


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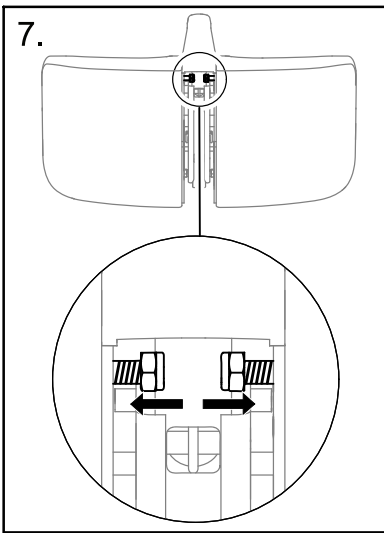




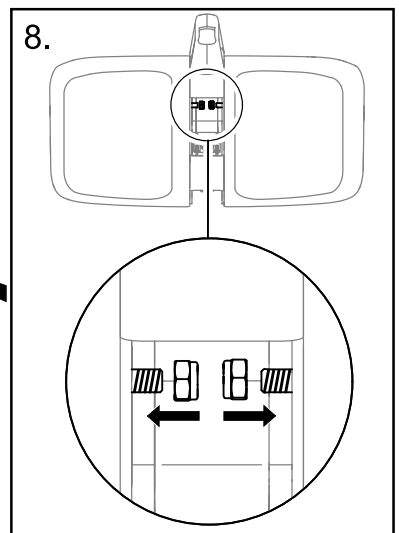
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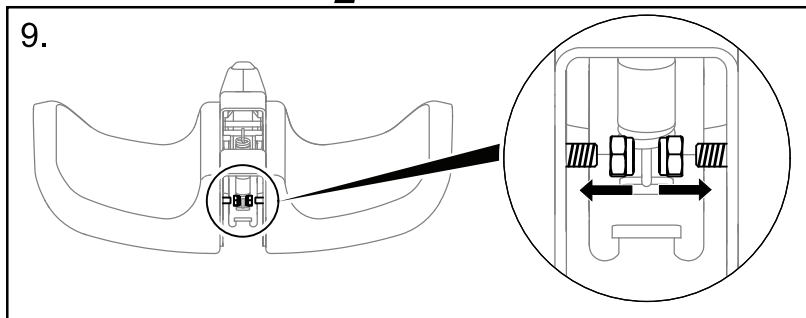
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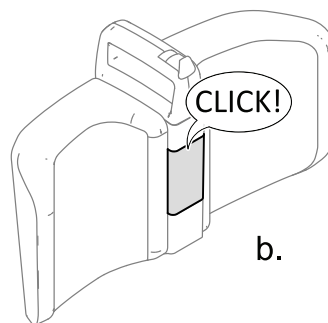
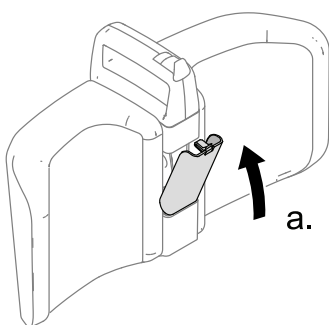
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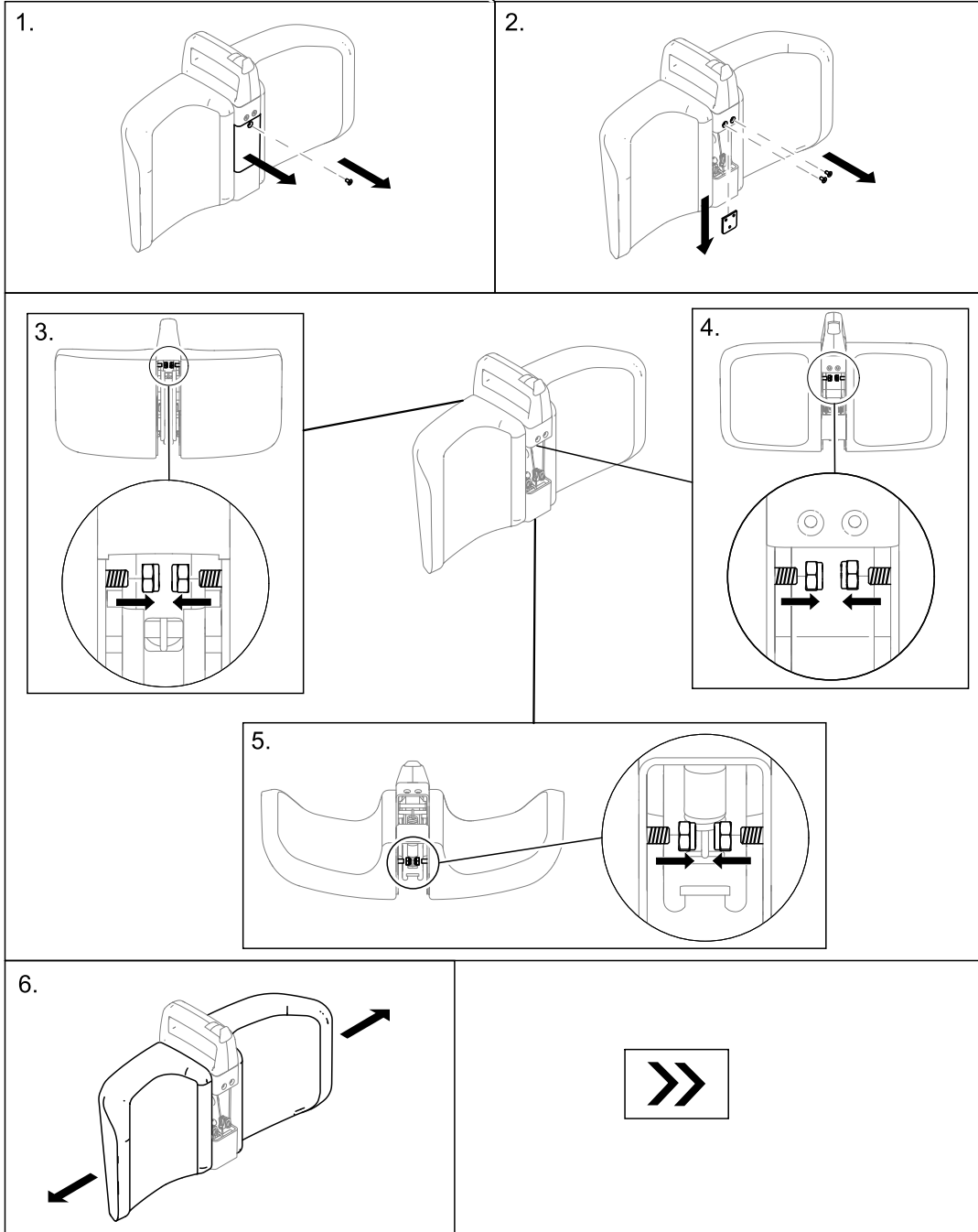
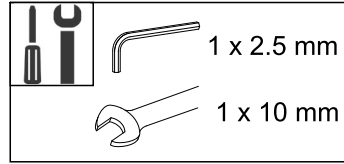
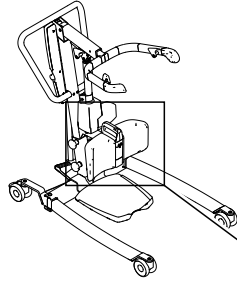
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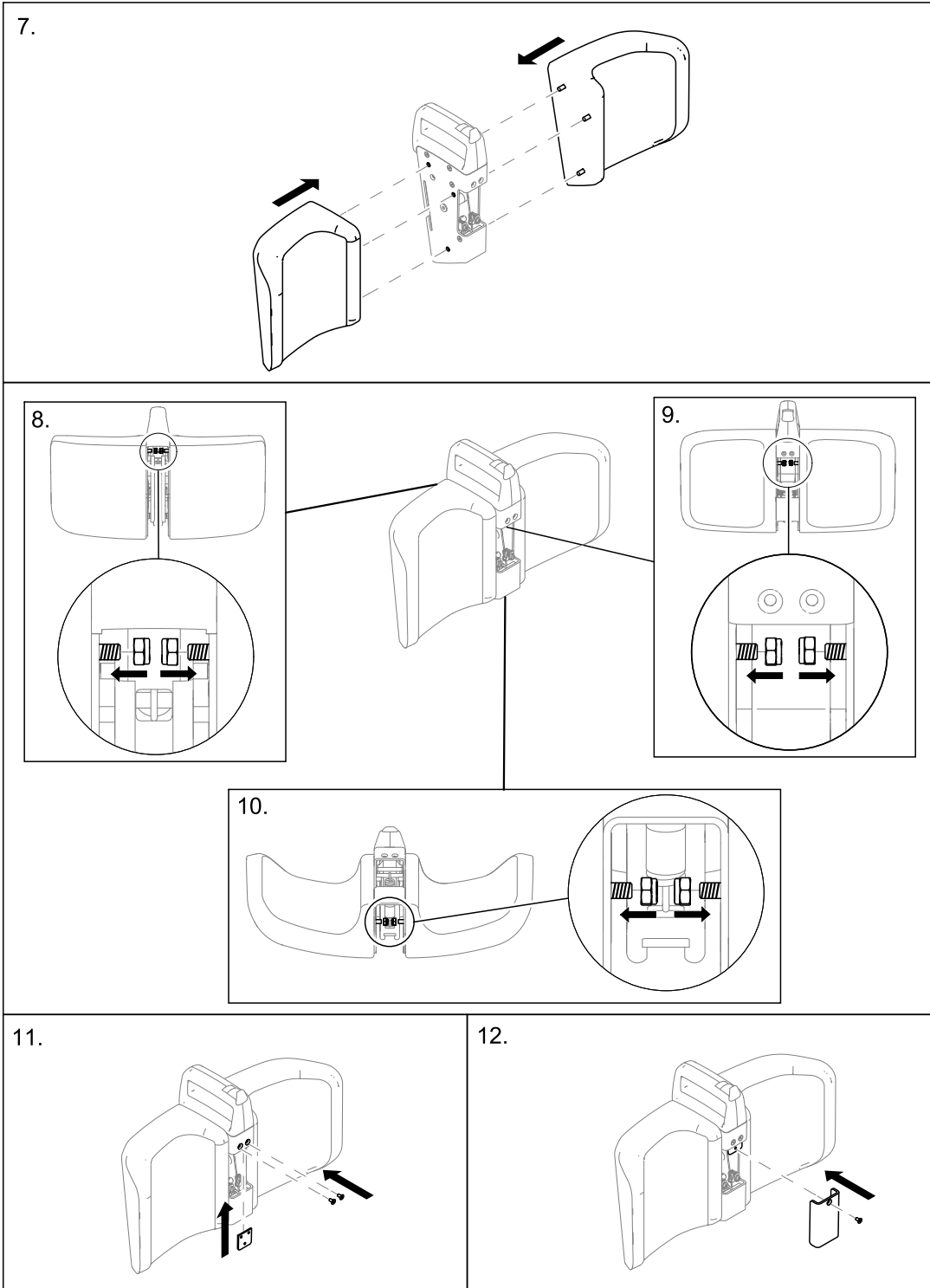


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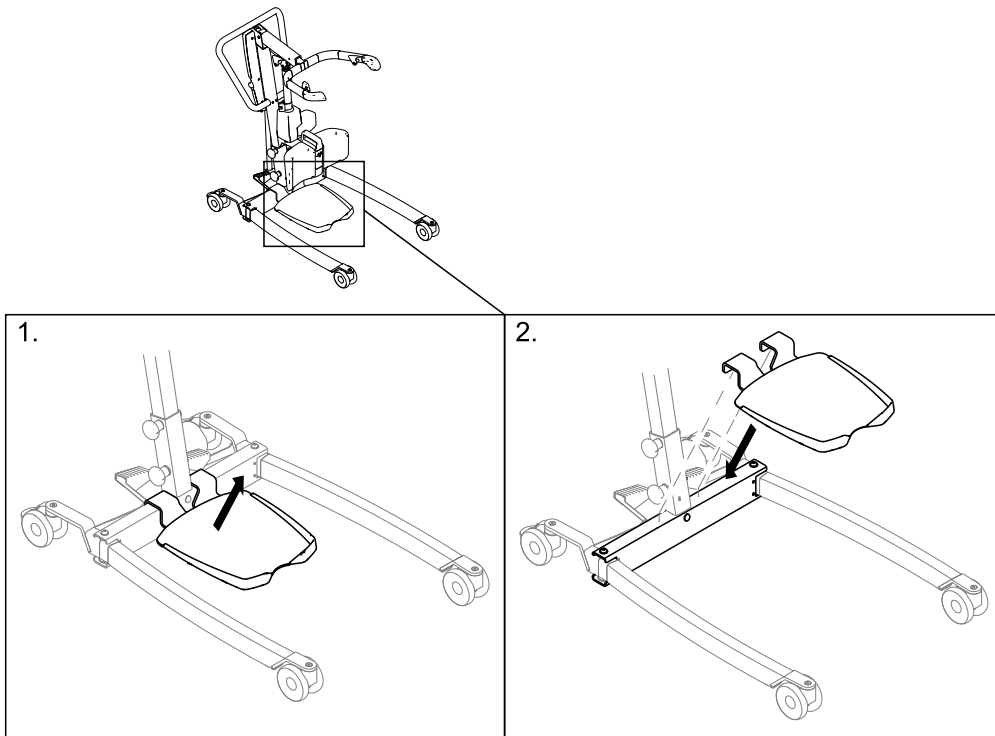


5.19 Replacing the shin cushions

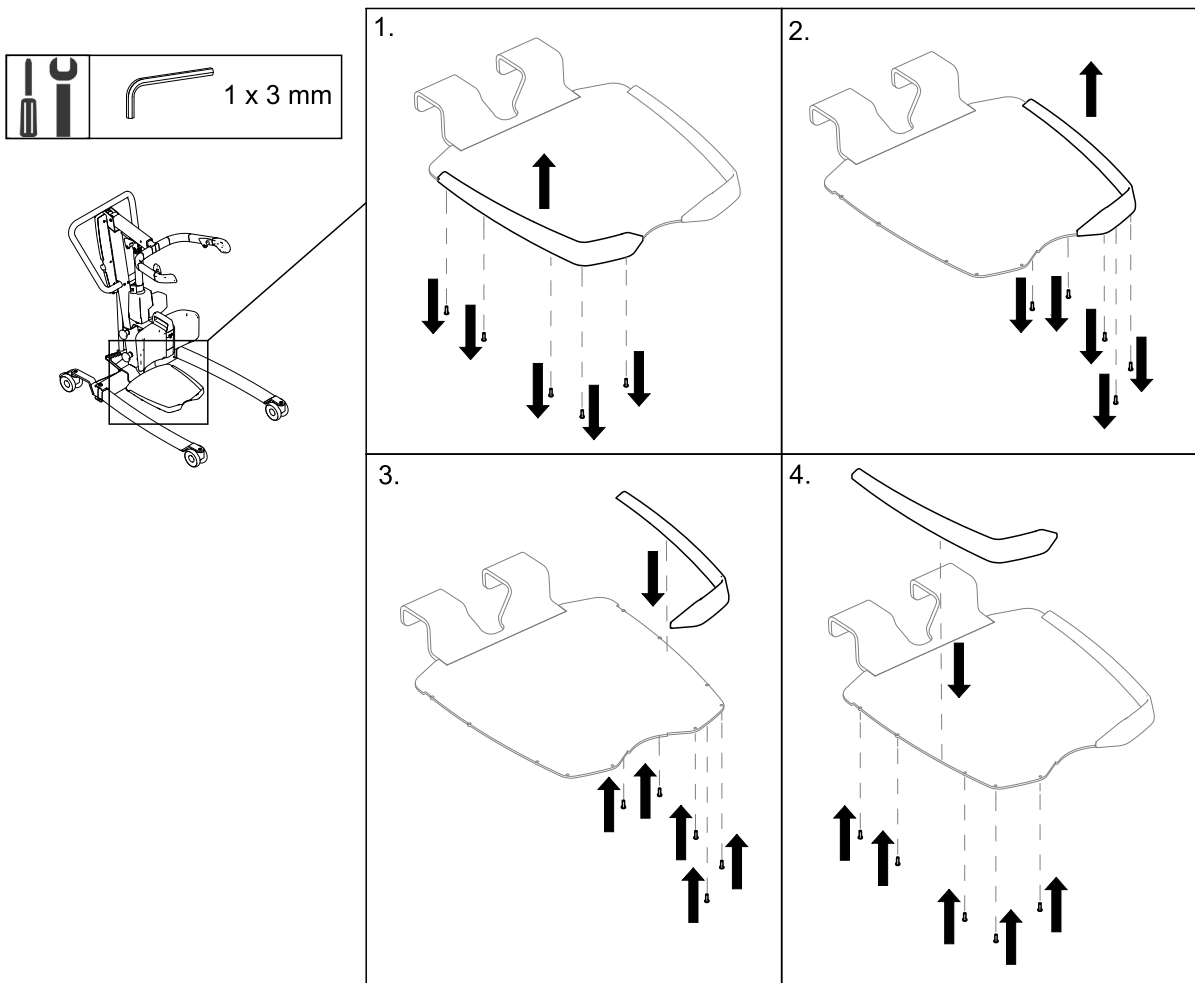




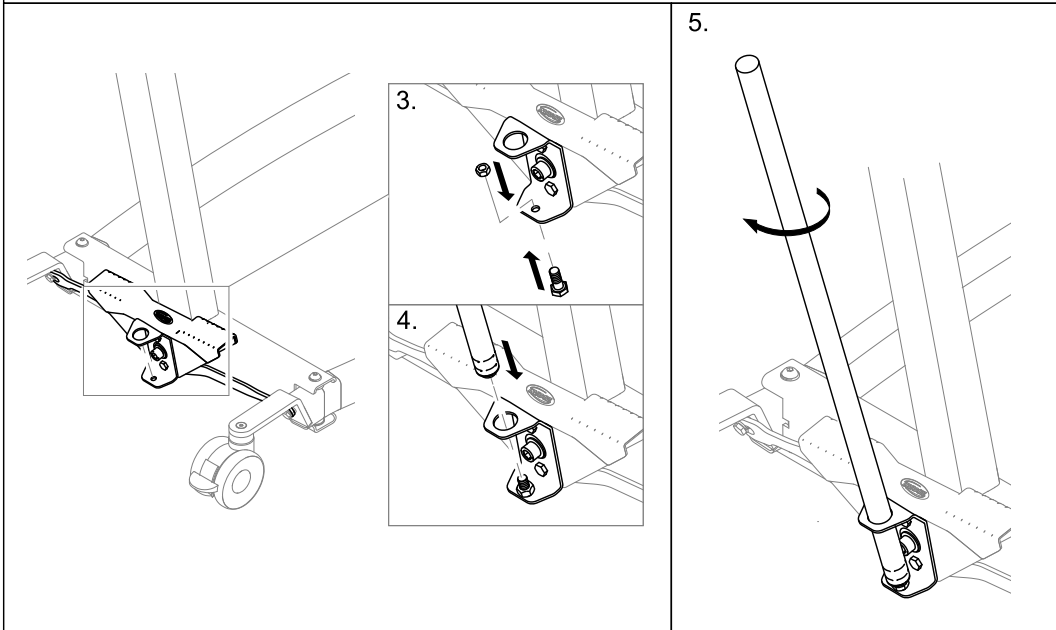
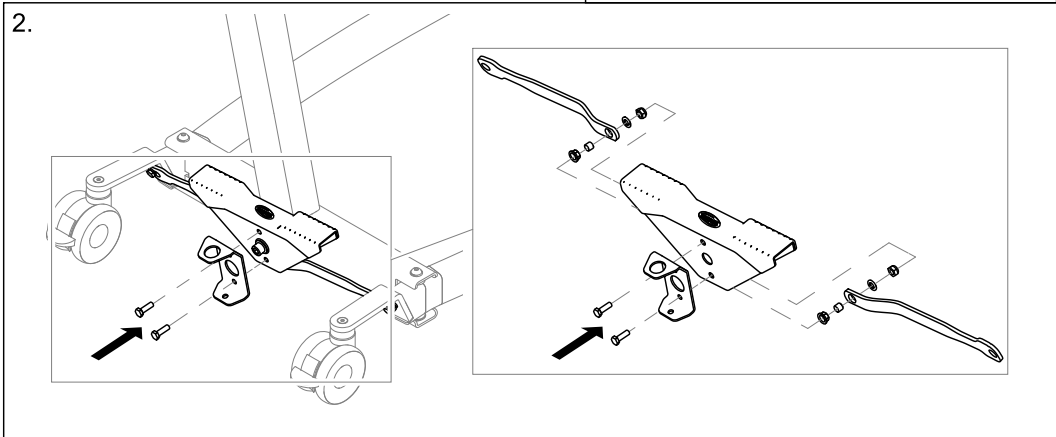
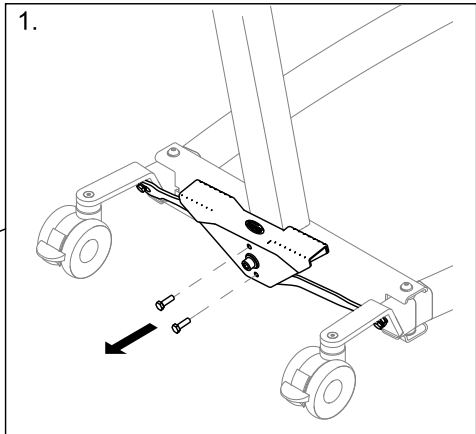
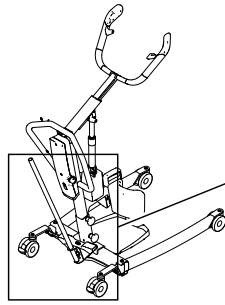
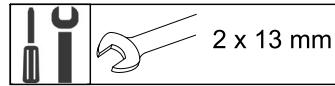
5.20 Replacing the foot plate



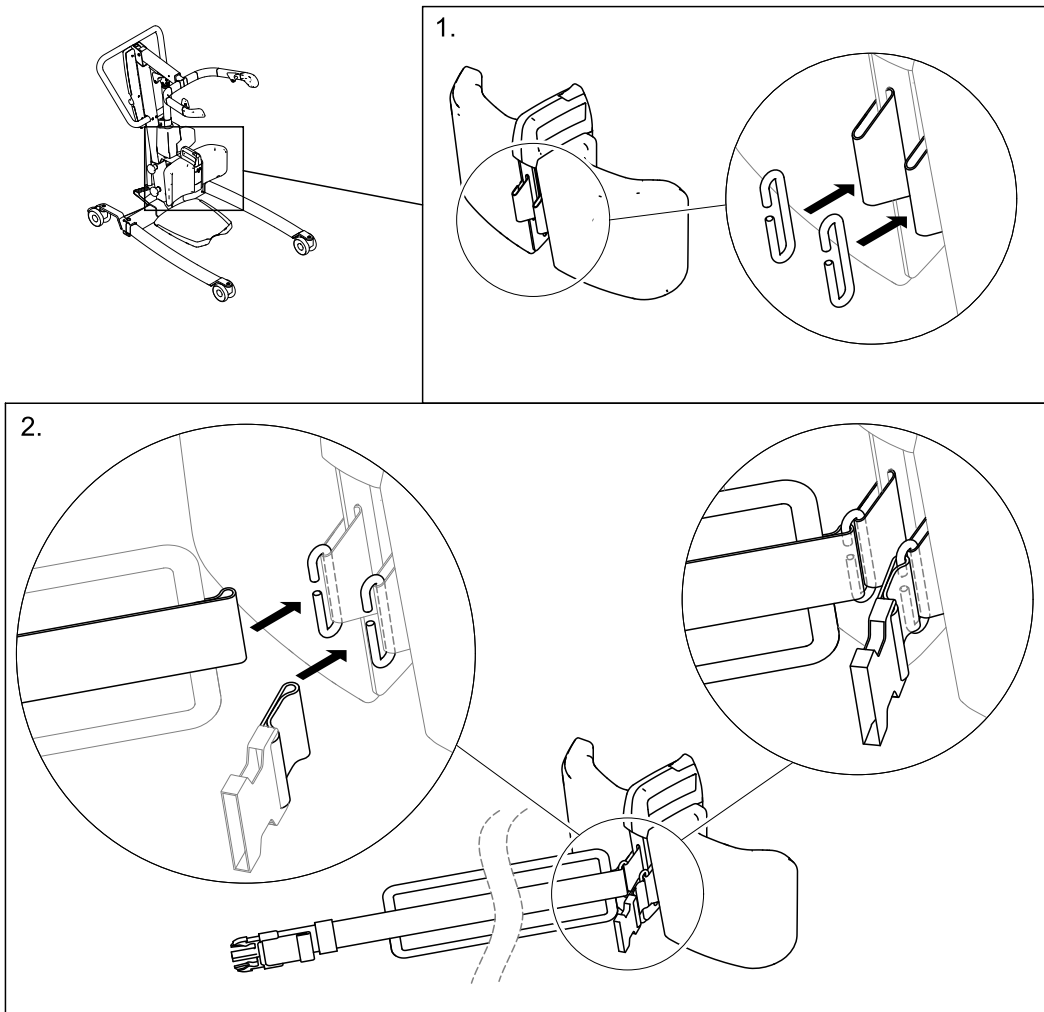
5.21 Replacing the heel block



5.22 Installing the lever for manual leg spreader



5.23 Installing the leg band



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