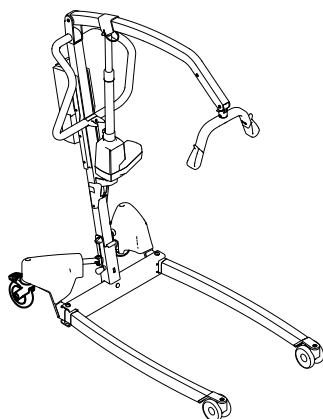
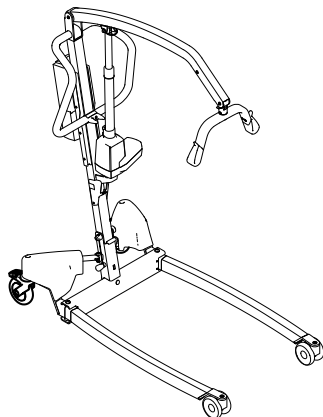
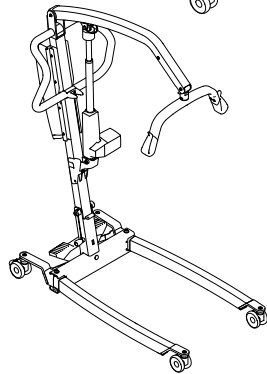
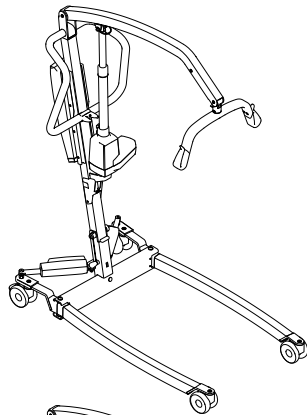


# Invacare® Birdie® EVO

Birdie® EVO, Birdie® EVO COMPACT, Birdie® EVO PLUS,  
Birdie® EVO XPLUS

## en Mobile 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

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<b>1 General</b>	<b>4</b>
1.1 Introduction	4
1.1.1 Symbols in this document	4
<b>2 Safety</b>	<b>5</b>
2.1 General Safety Information	5
2.2 Main parts of the lift.	5
<b>3 Servicing</b>	<b>6</b>
3.1 Service Interval	6
3.1.1 LOLER Statement	6
3.2 Tightening torques	6
3.3 Resetting the service light	6
3.4 Service inspection checklist	7
<b>4 Troubleshooting</b>	<b>9</b>
4.1 Identifying and repairing faults	9
<b>5 Instructions</b>	<b>11</b>
5.1 Disassembling a foldable mast	11
5.2 Assembling a foldable mast	11
5.3 Replacing 75 mm castors	12
5.4 Replacing 100 mm castors	12
5.5 Replacing 125 mm castors	13
5.6 Replacing the spreader bar	13
5.7 Replacing the boom actuator	14
5.8 Replacing the boom	15
5.9 Replacing the damper	15
5.10 Replacing a leg actuator without cover	16
5.11 Replacing a leg actuator with cover	17
5.12 Replacing electrical legs without actuator cover	19
5.13 Replacing electrical legs with actuator cover	20
5.14 Replacing the foot pedal and/or rods	21
5.15 Replacing manual legs	22
5.16 Replacing the CBJ Home control unit	23
5.17 Replacing the CBJ Care, CBJ1 , CBJ2 control unit	24
5.18 Installing the Wunder RS300 scale with SMARTLOCK®	25
5.19 Installing the Wunder RS300 scale with a fixed spreader bar.	26
5.20 Installing the lever for manual leg spreader	27

# 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.



#### IMPORTANT

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.


**IMPORTANT!**

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.


**IMPORTANT!**

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).


**IMPORTANT!**

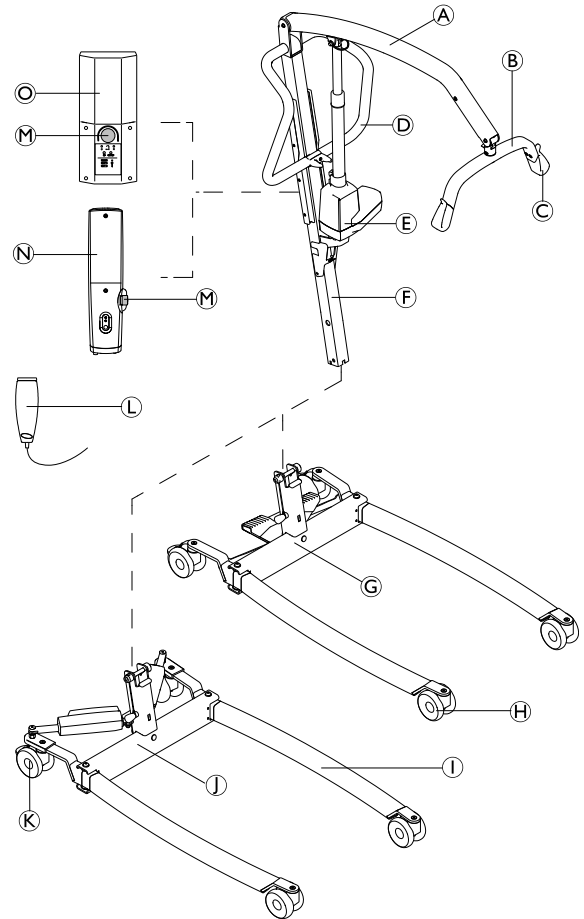
Refer to the user manual of this product for information on

- 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)	Spreader bar – with or without SMARTLOCK™
(C)	Hook for sling
(D)	Push bar
(E)	Lifting actuator
(F)	Mast – foldable or fixed
(G)	Base with foot pedal for manual leg spreader
(H)	Front Castors
(I)	Leg
(J)	Base with actuators for electrical leg spreader – with or without actuator covers
(K)	Rear castors with brake
(L)	Hand control
(M)	Emergency Stop
(N)	CBJ Home control unit with integrated battery
(O)	CBJ Care, CBJ1 or CBJ2 control unit with detachable battery

## 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](http://www.hse.gov.uk).

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

### 3.2 Tightening torques



#### IMPORTANT

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
M16	180 Nm

### 3.3 Resetting the service light

(CBJ Care control unit only)


To reset the service light after a service has been performed:

1. Locate the hand control.
2. Press and hold the UP button and the DOWN button at the same time for five seconds.
3. You will hear a sound when the service light has been reset.


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

If the service light 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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Checkpoints for Invacare® Birdie® EVO according to ISO 10535:2006 Annex B	✓	✗	Comment
<b>General inspection</b>			
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			
<b>Visual inspection of mechanical parts</b>			
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 spreader bar)			
No deformation, wear, sharp edges or other damages on the sling hooks			
No deformation or other damages on spreader bar holder, leg spreader lever and spreader bar release mechanism (SMARTLOCK® option)			
Castors free of damages, debris and dirt			
<b>Visual inspection of electrical parts</b>			
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
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Checkpoints for Invacare® Birdie® EVO according to ISO 10535:2006 Annex B	✓	✗	Comment
<b>Functional tests</b>			
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 lowering lowers the boom at safe speed			
Successful load test (full lifting cycle with maximum safe working load applied) 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			
Release mechanism of the spreader bar is working properly (release, smooth removal/insertion and self-locking) (SMARTLOCK® option)			
Dampening mechanism of the spreader bar is working properly (smooth swinging, effective dampening) (Slow'R® option)			
Folding mechanism of the mast is working properly (release, smooth folding/unfolding and self-locking) (option)			

**Overall assessment**

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

Date of next inspection: \_\_\_\_\_

Name: \_\_\_\_\_ Date / Signature: \_\_\_\_\_

**IMPORTANT**

Corrective actions must be performed by a qualified technician.  
 Instructions for replacing and adjusting main parts are described in the service manual.




## 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 or 5.1 <i>Disassembling a foldable mast, page 11</i>
	Mast/Boom joint loose.	Check and tighten the Mast/ Boom connection. See 5.8 <i>Replacing the boom, page 15</i>
	Tie - Rods are loose.	Check and tighten the screws of the rods and/ or pedal. See 5.14 <i>Replacing the foot pedal and/or rods, page 21</i>
Castors/Brakes noisy or stiff.	Fluff or debris in bearings.	Replace the castors. See 5.3 <i>Replacing 75 mm castors, page 12</i> or 5.4 <i>Replacing 100 mm castors, page 12</i>
Noisy or dry sound from pivots.	Pivots are worn or damaged	Replace the pivots. See 5.8 <i>Replacing the boom, page 15</i> , 5.15 <i>Replacing manual legs, page 22</i> , 5.12 <i>Replacing electrical legs without actuator cover, page 19</i> or 5.13 <i>Replacing electrical legs with actuator cover, page 20</i>
Electric actuator fails to lift or legs fail to open 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 5.16 <i>Replacing the CBJ Home control unit, page 23</i> or 5.17 <i>Replacing the CBJ Care, CBJ1 , CBJ2 control unit, page 24</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 5.7 <i>Replacing the boom actuator, page 14</i> , 5.10 <i>Replacing a leg actuator without cover, page 16</i> or 5.11 <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 5.7 <i>Replacing the boom actuator, page 14</i> , 5.10 <i>Replacing a leg actuator without cover, page 16</i> or 5.11 <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.
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 5.8 <i>Replacing the boom, page 15</i>

Symptoms	Faults	Solution
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>5.14 Replacing the foot pedal and/or rods, page 21</i>
Damping of the spreader bar has lessened or disappeared completely.	Damper is damaged	Replace the damper. See <i>5.9 Replacing the damper, page 15</i>
The detachable spreader bar does not fix to the connector on the boom	The locking mechanism is damaged	Replace the spreader bar connector. See <i>5.9 Replacing the damper, page 15</i>

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

## 5 Instructions

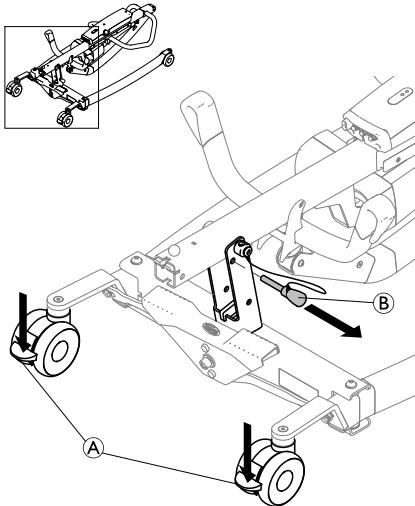
### 5.1 Disassembling a foldable mast


**CAUTION!**
**Risk of injury and damage to property**

Improper handling of heavy parts can cause injury or damage to property.

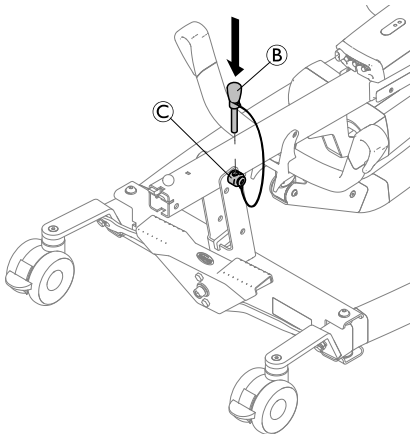
- Always perform the following procedures with the mast in folded position.
- Assistance may be required to handle heavy parts.

1.



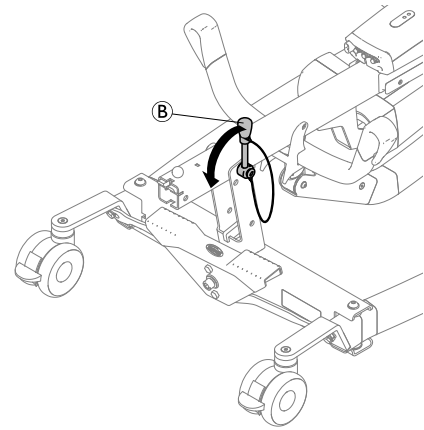
Lock both rear castors (A) and remove the locking pin (B).

2.



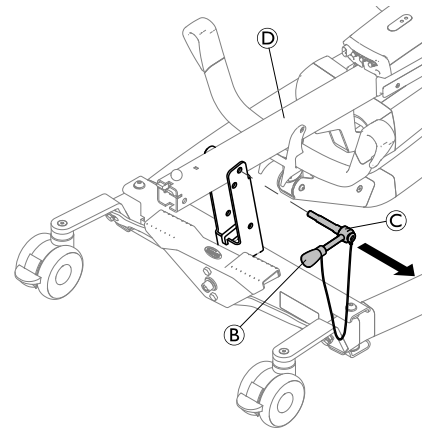
Insert the locking pin (B) into the hole on the pivot pin (C).

3.



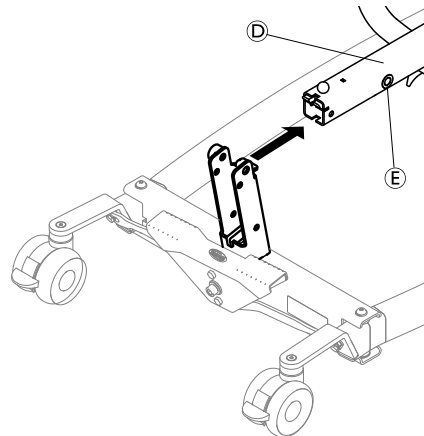
Rotate the locking pin (B) anti-clockwise to unlock the pivot pin (C).

4.



Hold the mast-boom assembly (D) in position and remove the pivot pin (C) with the locking pin (B).

5.



Remove the mast-boom assembly (D) from the base.

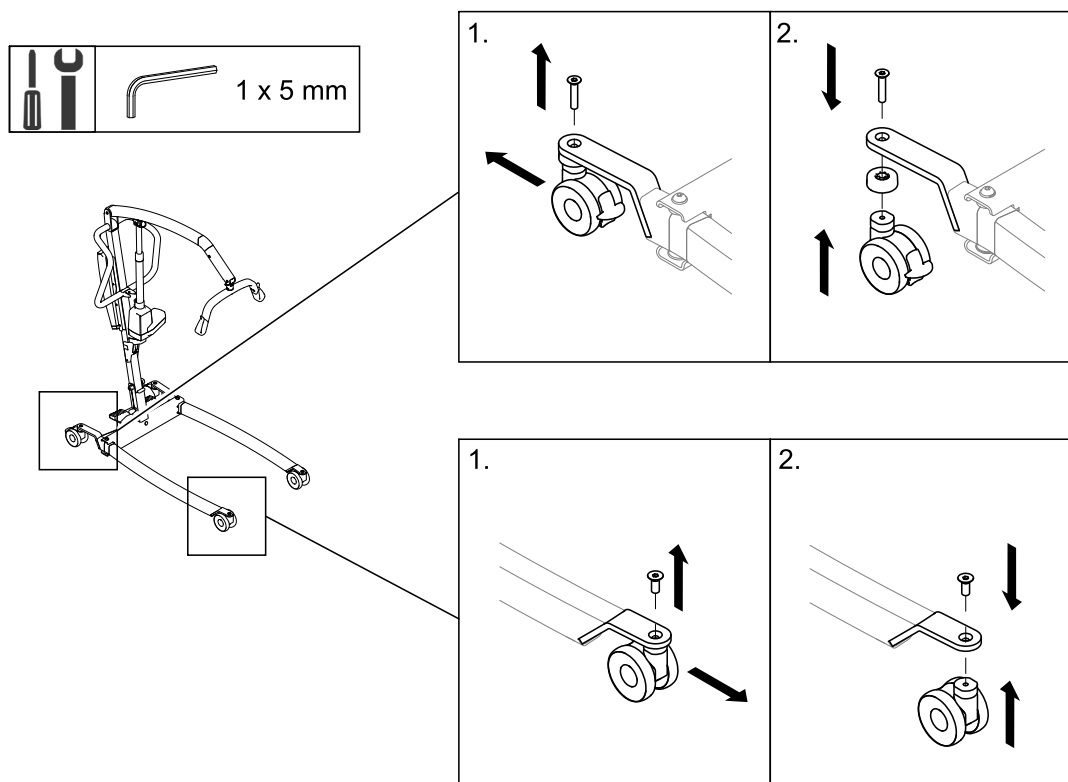


The bushings (E) are not fixed to the mast. Store them in a safe place or fix them to the mast with tape during transport and storage.

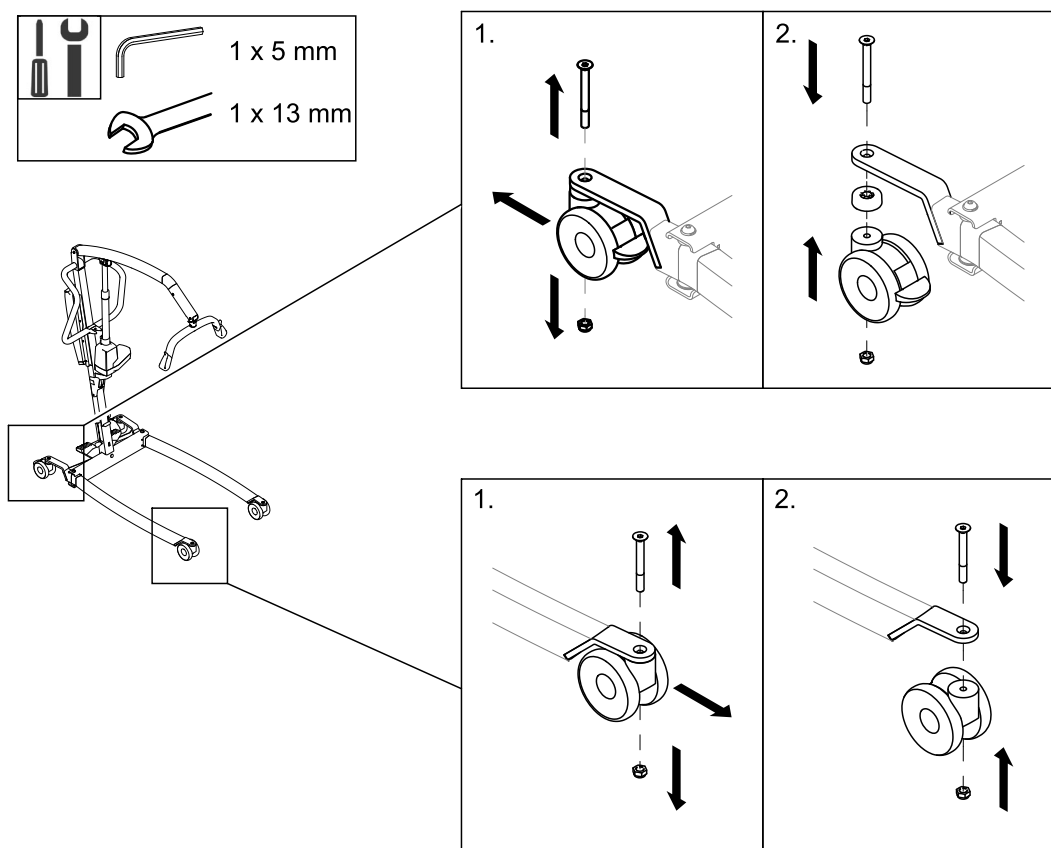
### 5.2 Assembling a foldable mast

1. Reverse the procedure described in 5.1 *Disassembling a foldable mast*, page 11.
2. Check that the pivot pin is completely inserted and properly secured.
3. The mast can now be folded upright for usage.

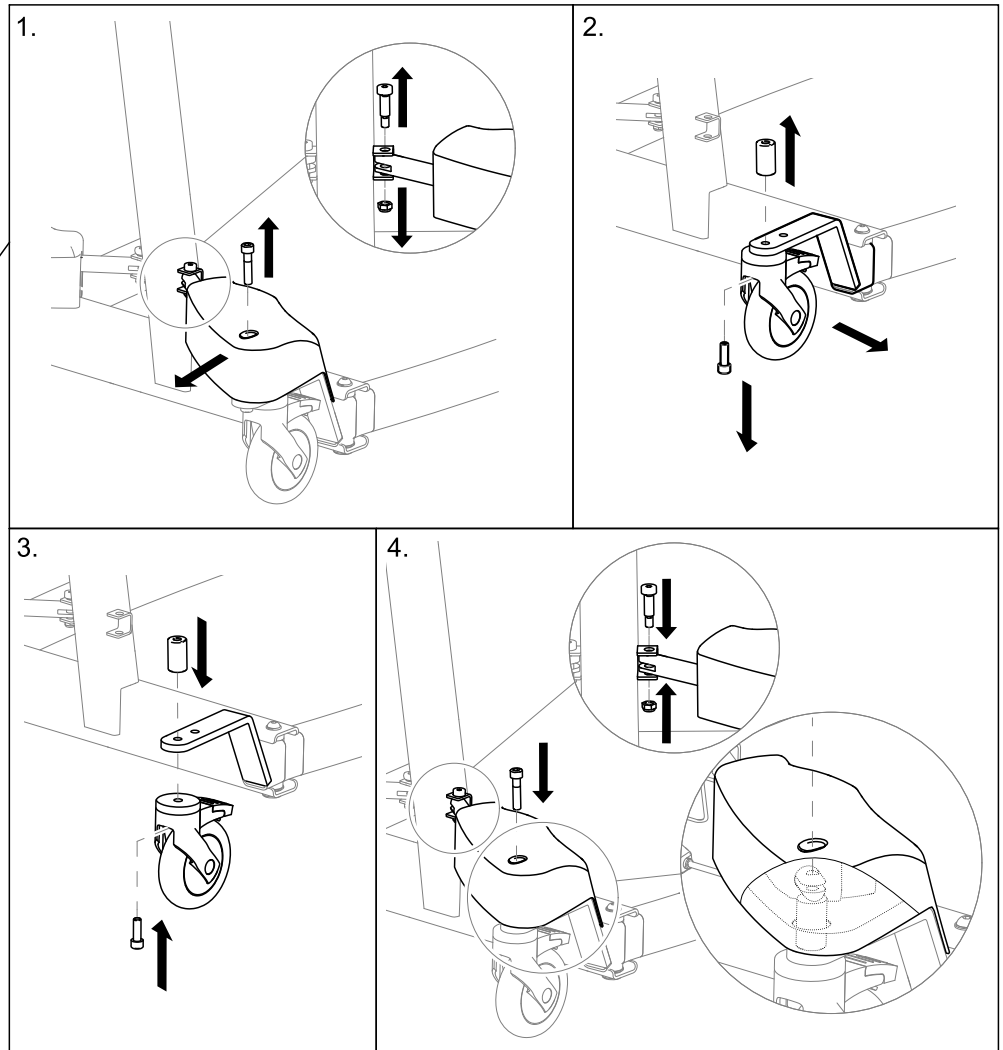
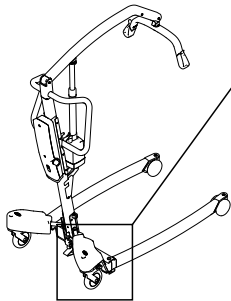
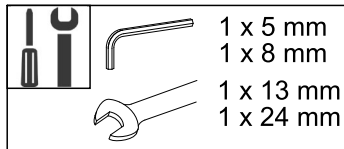
### 5.3 Replacing 75 mm castors



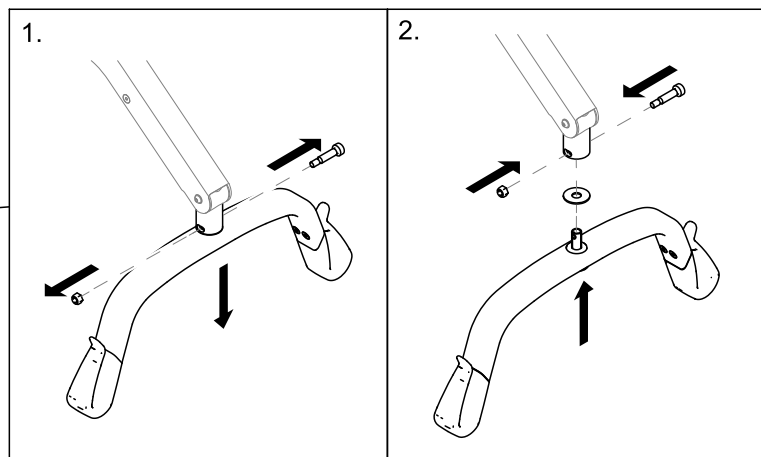
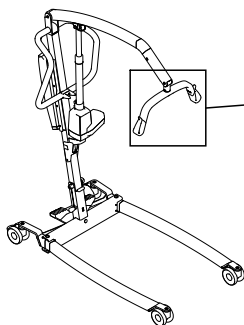
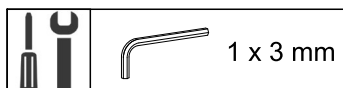
### 5.4 Replacing 100 mm castors



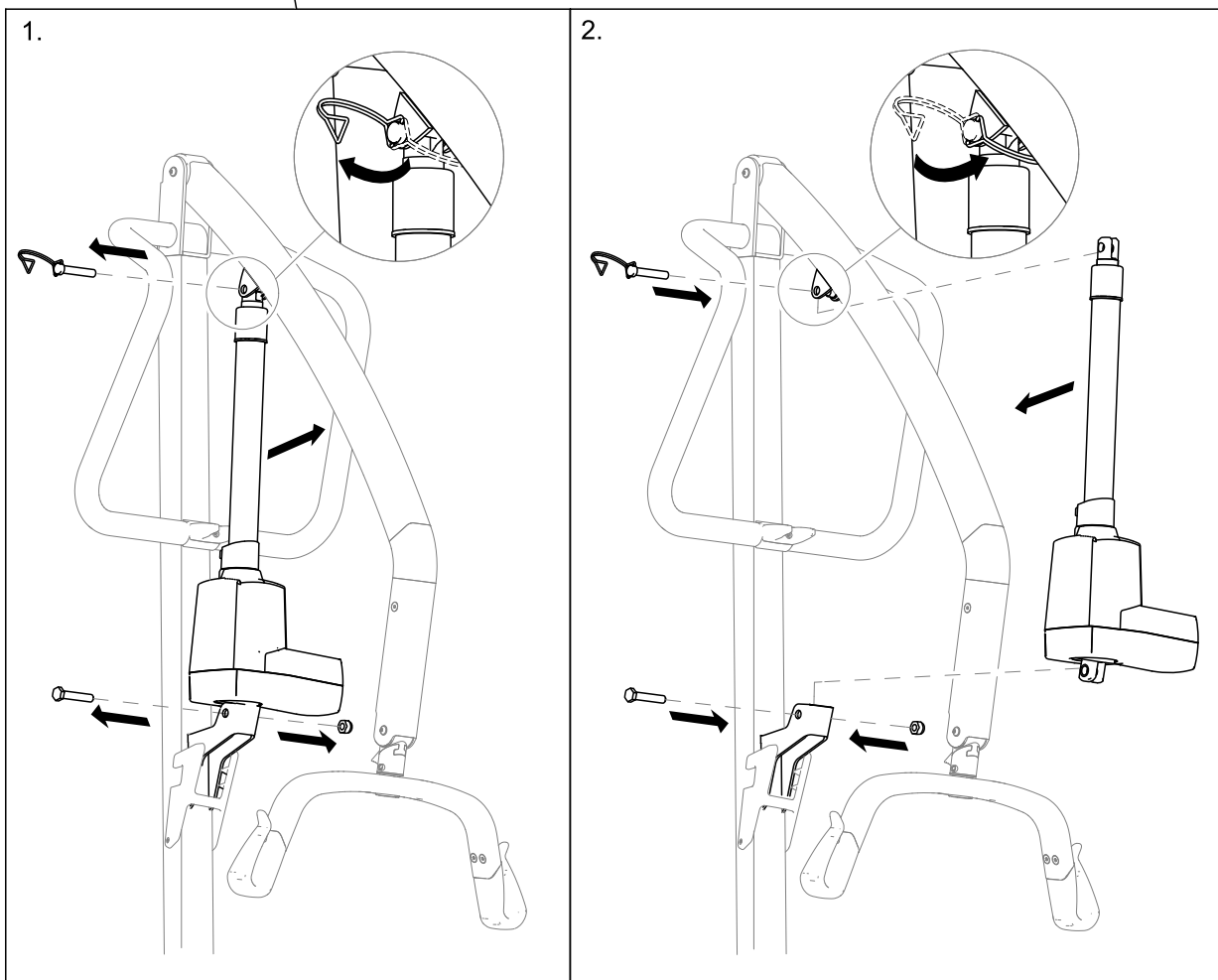
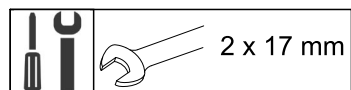
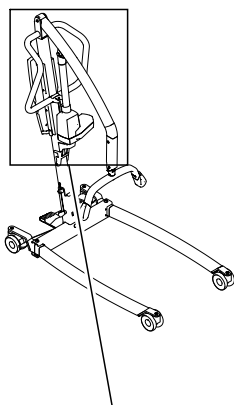
## 5.5 Replacing 125 mm castors



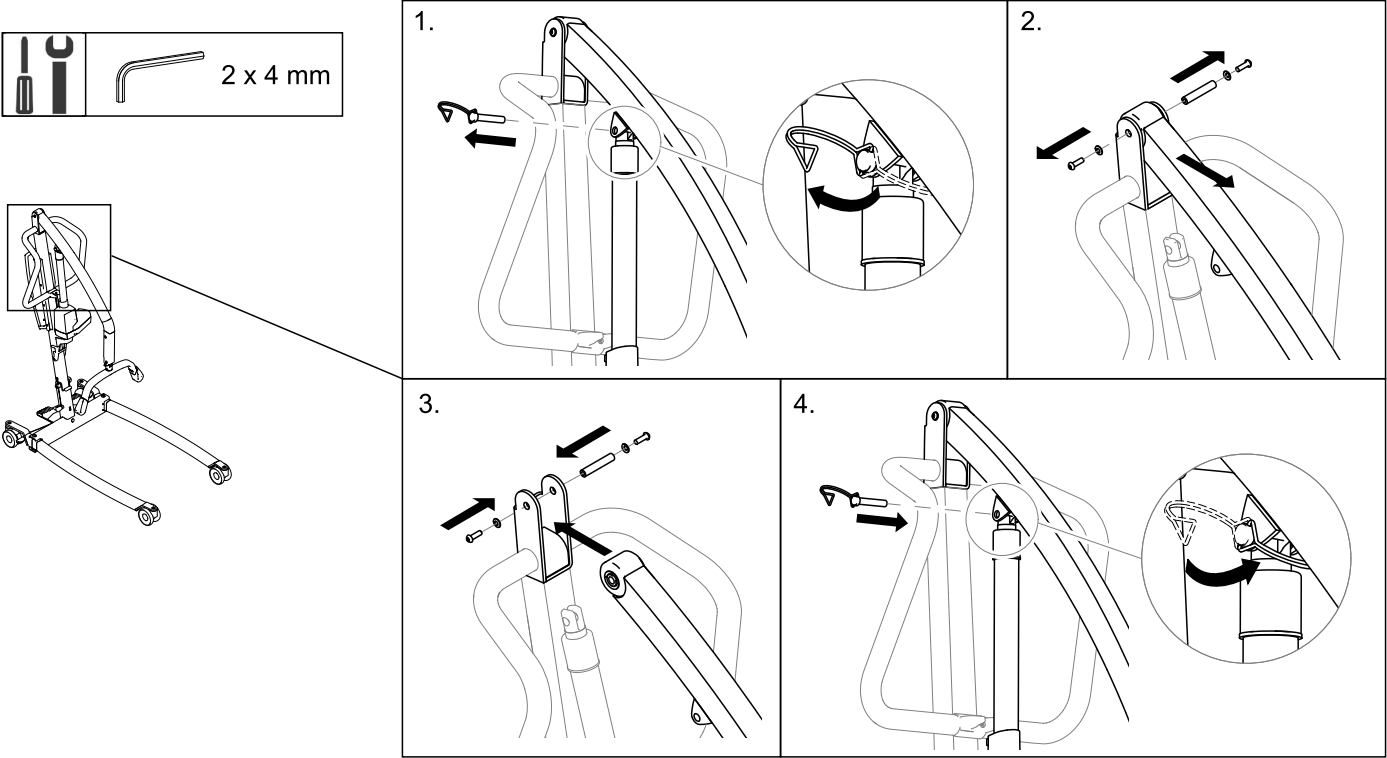
## 5.6 Replacing the spreader bar



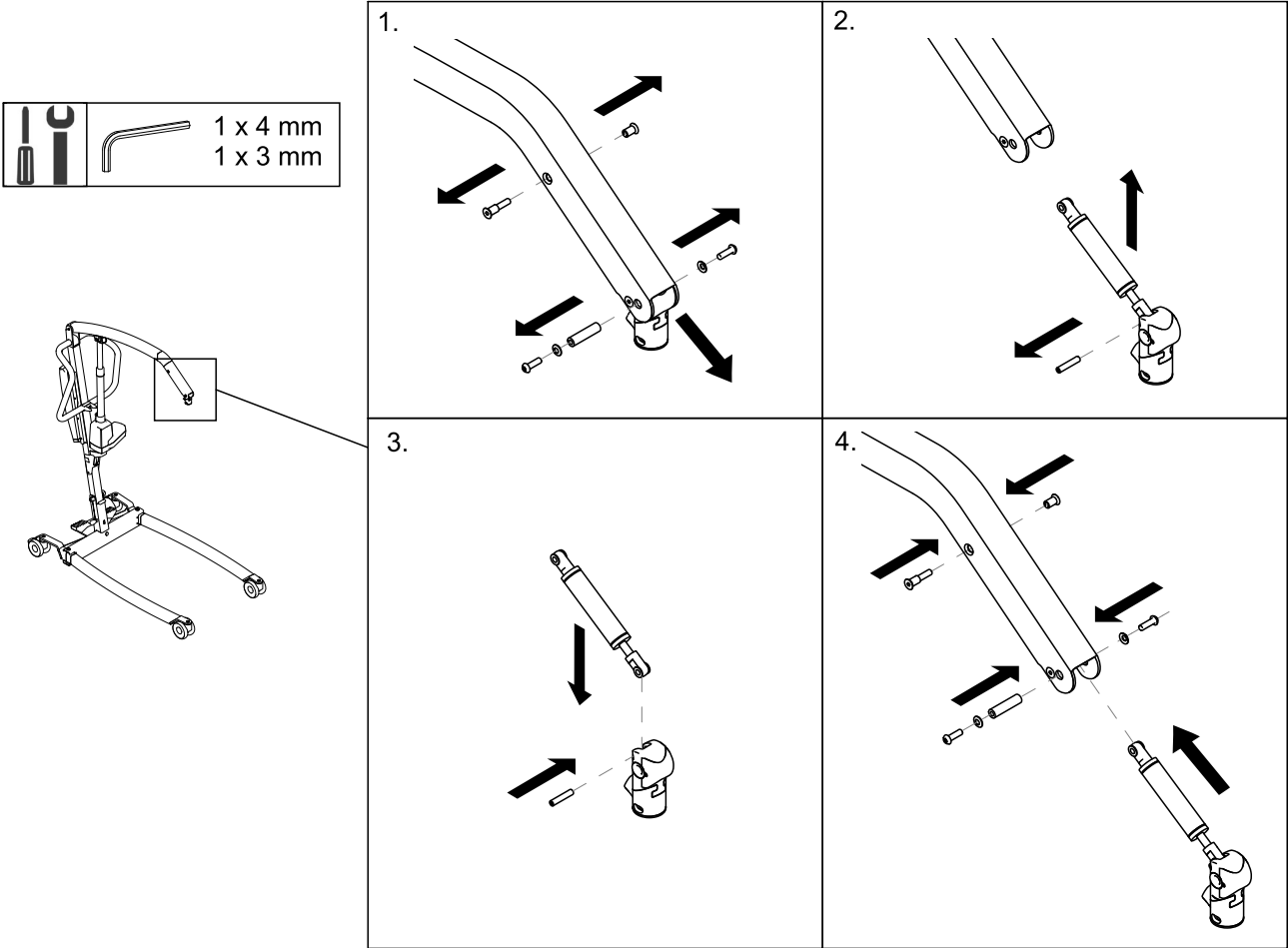
## 5.7 Replacing the boom actuator



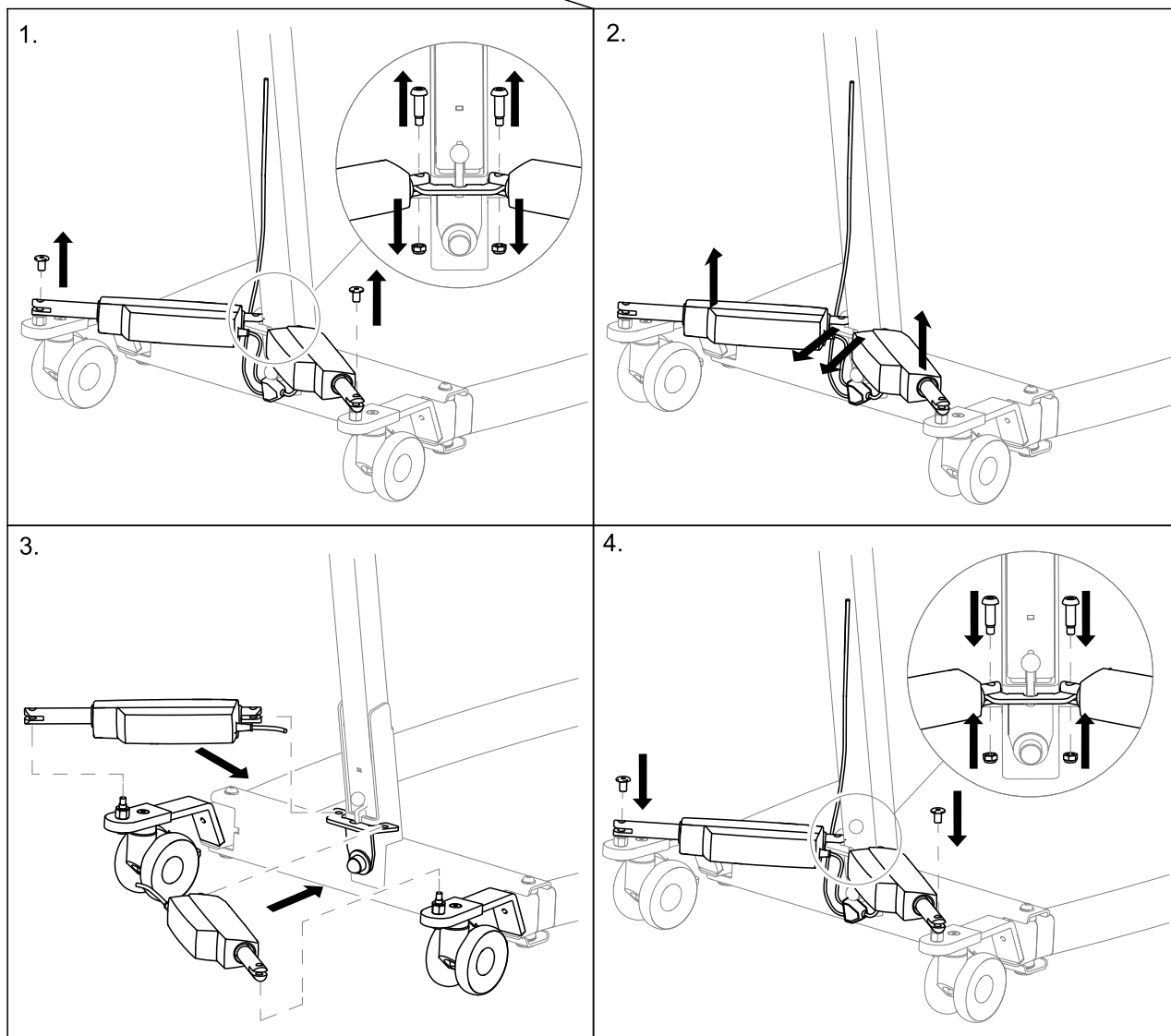
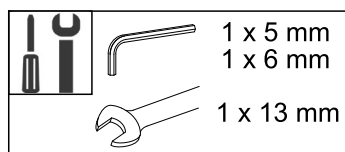
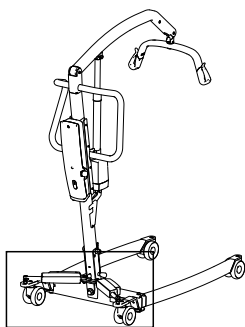
5.8 Replacing the boom



5.9 Replacing the damper

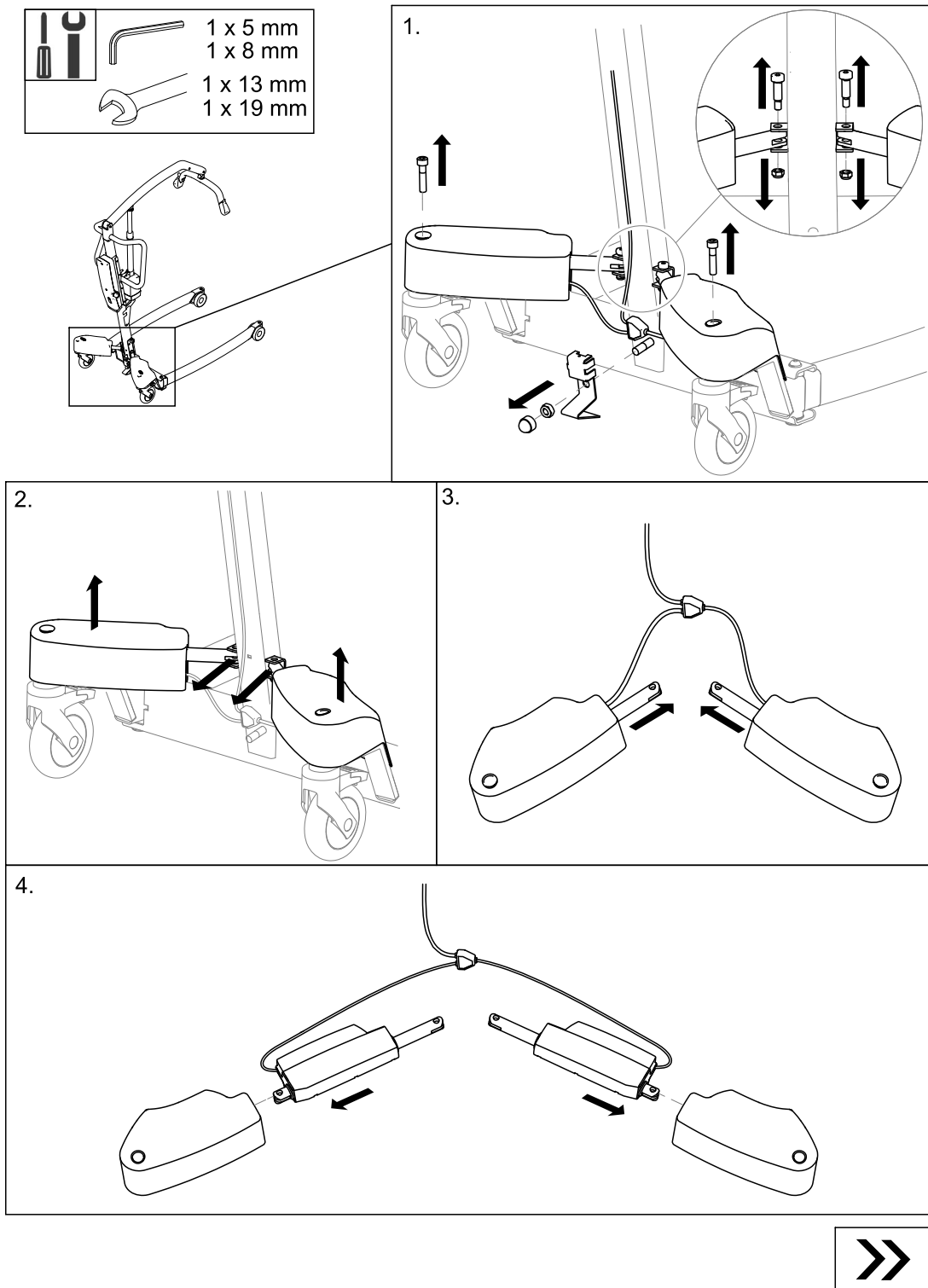


## 5.10 Replacing a leg actuator without cover

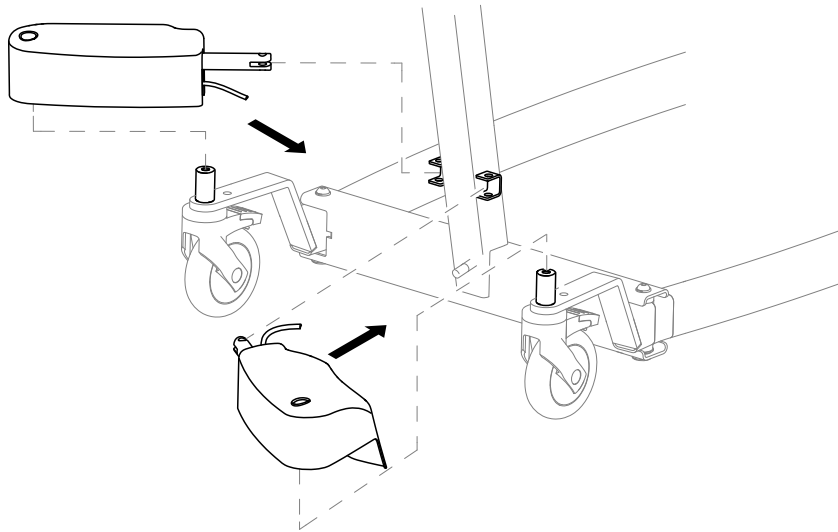




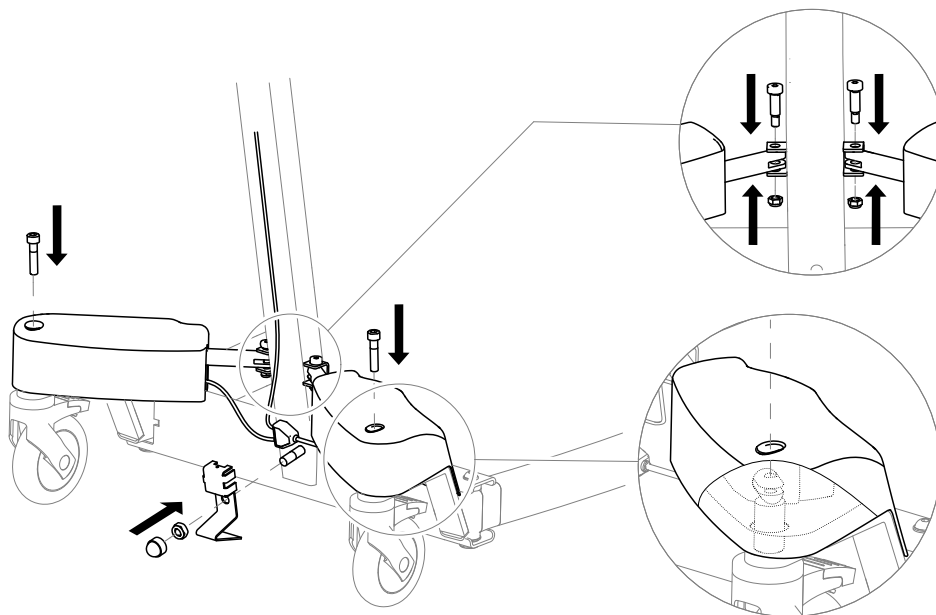
## 5.11 Replacing a leg actuator with cover



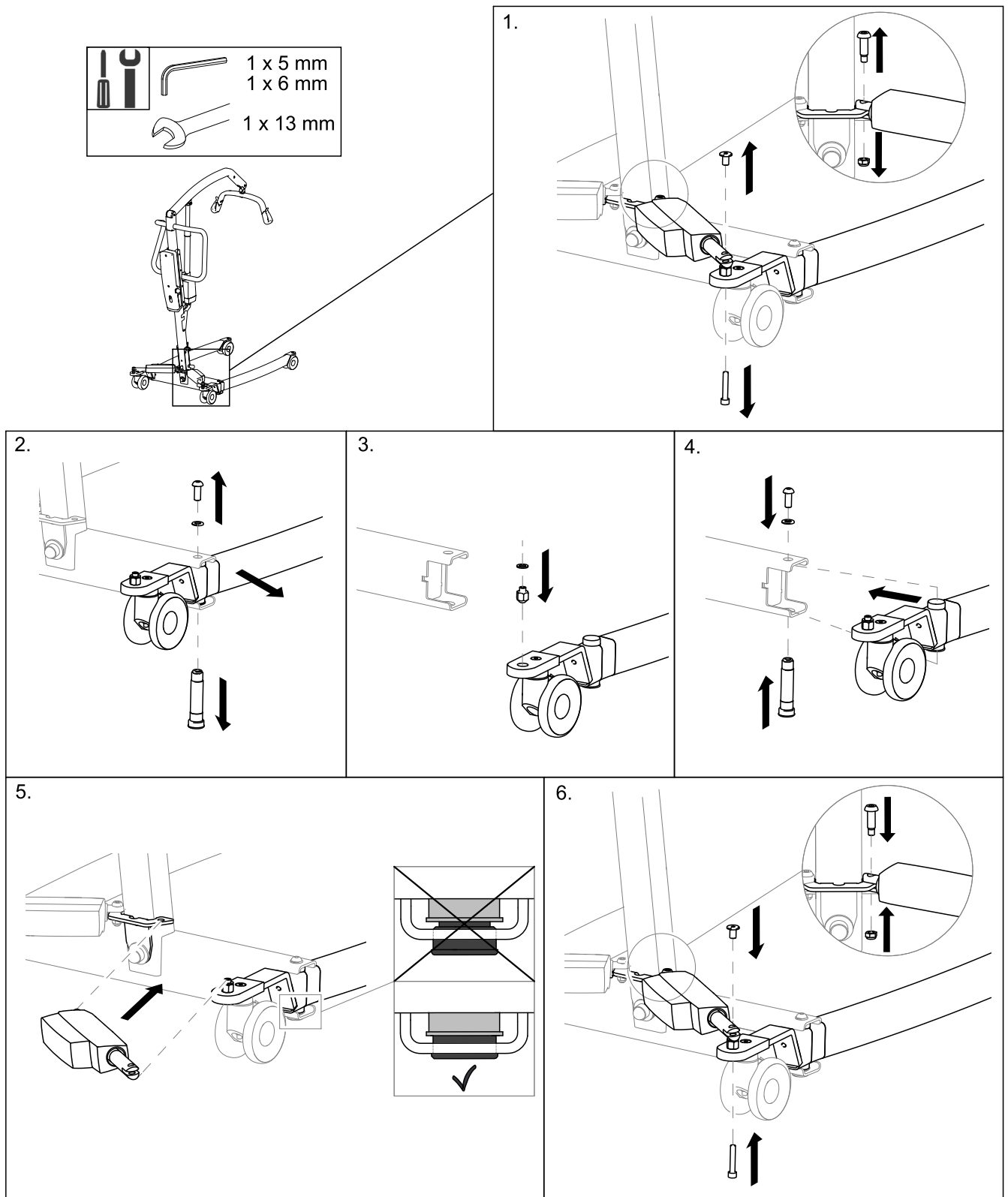
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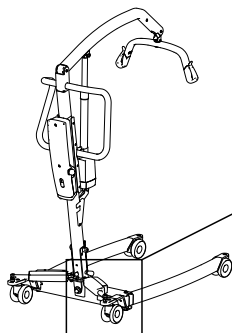
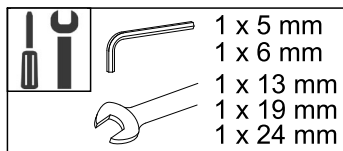
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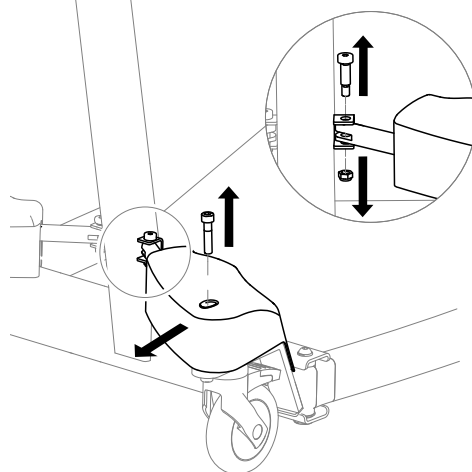
## 5.12 Replacing electrical legs without actuator cover



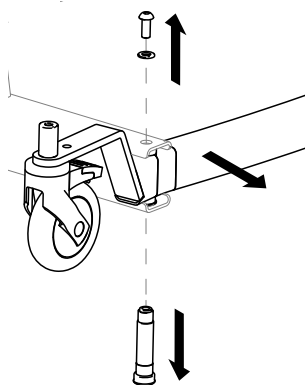
## 5.13 Replacing electrical legs with actuator cover



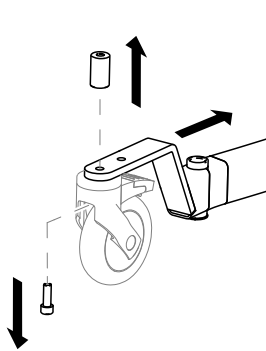
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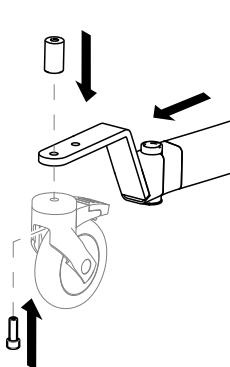
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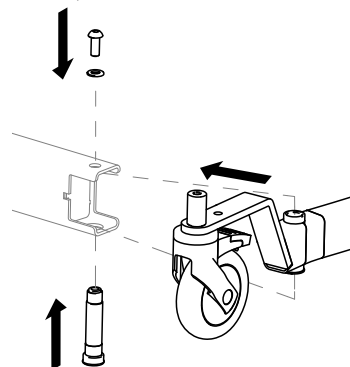
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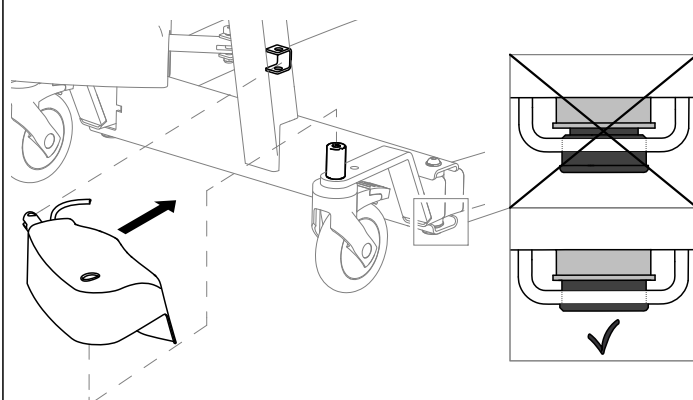
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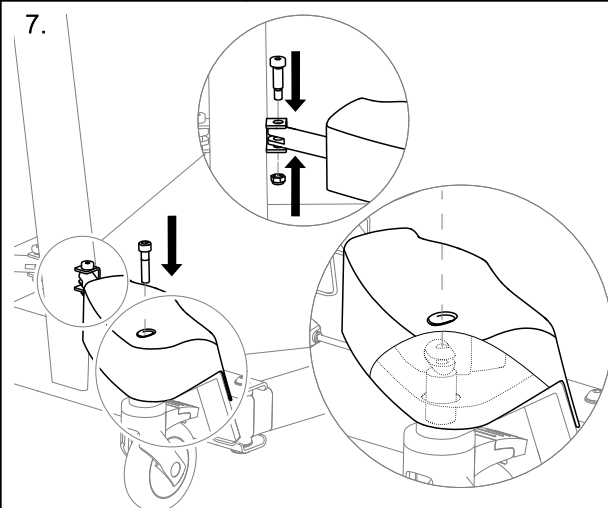
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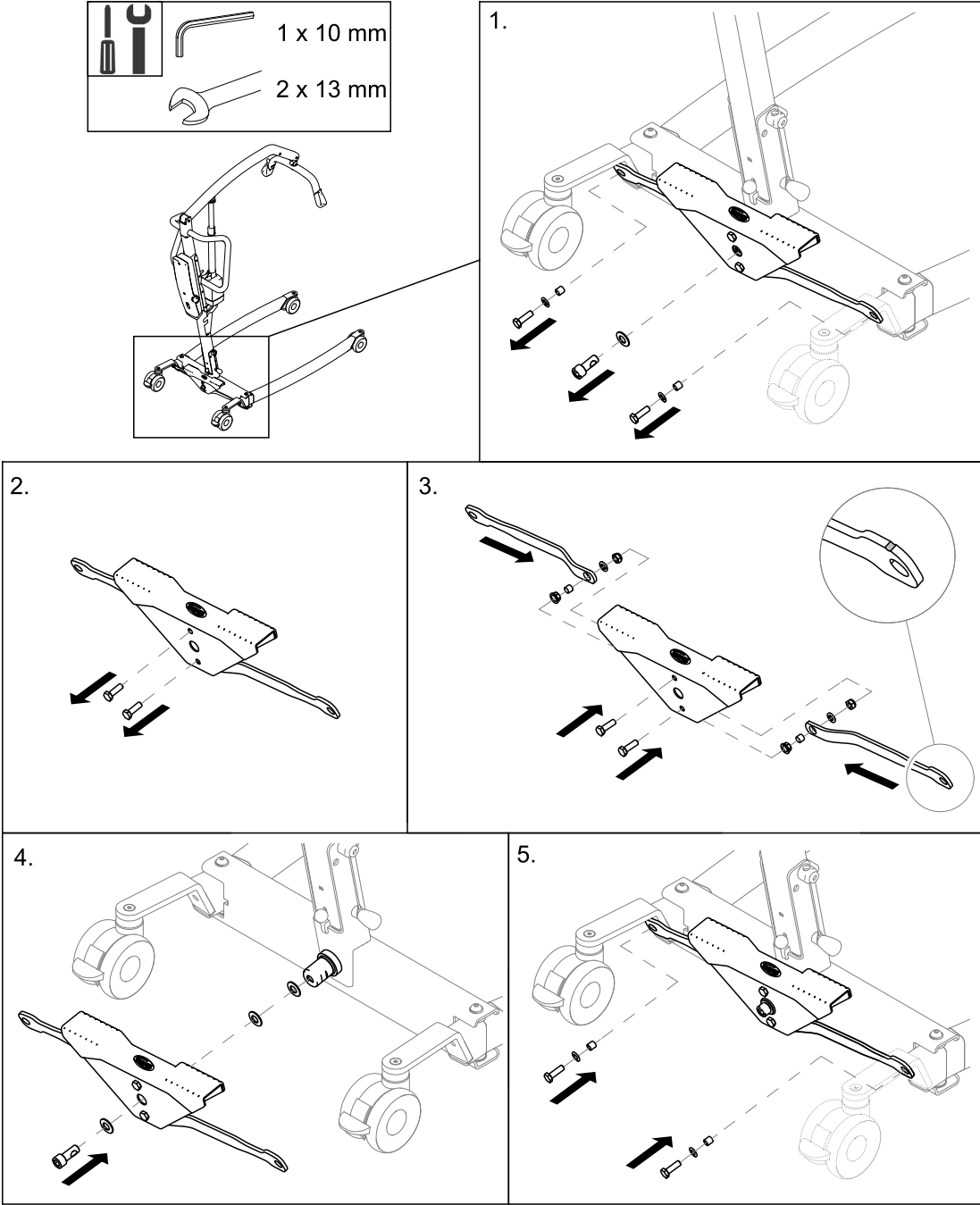
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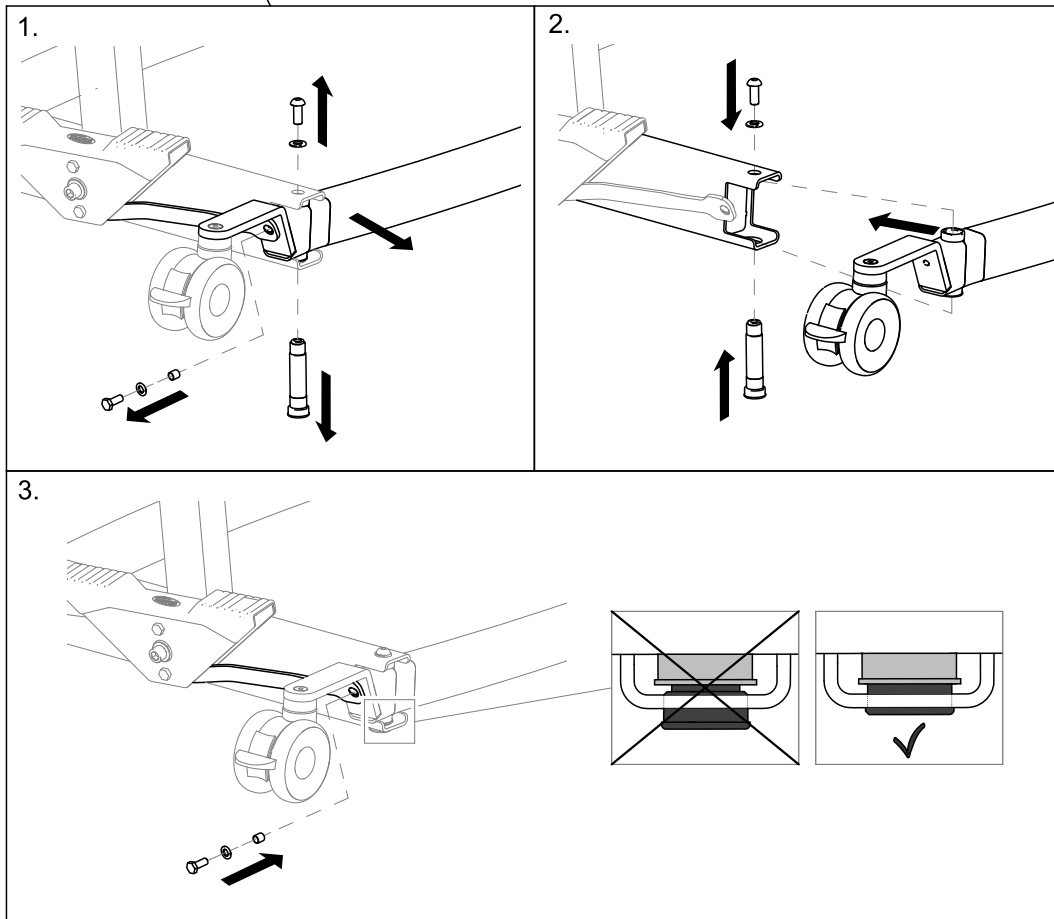
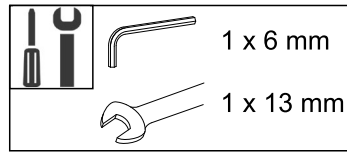
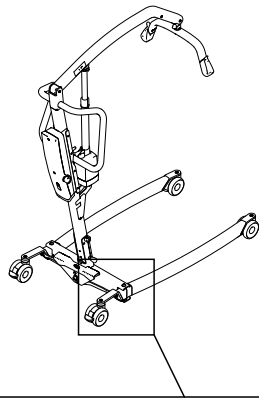
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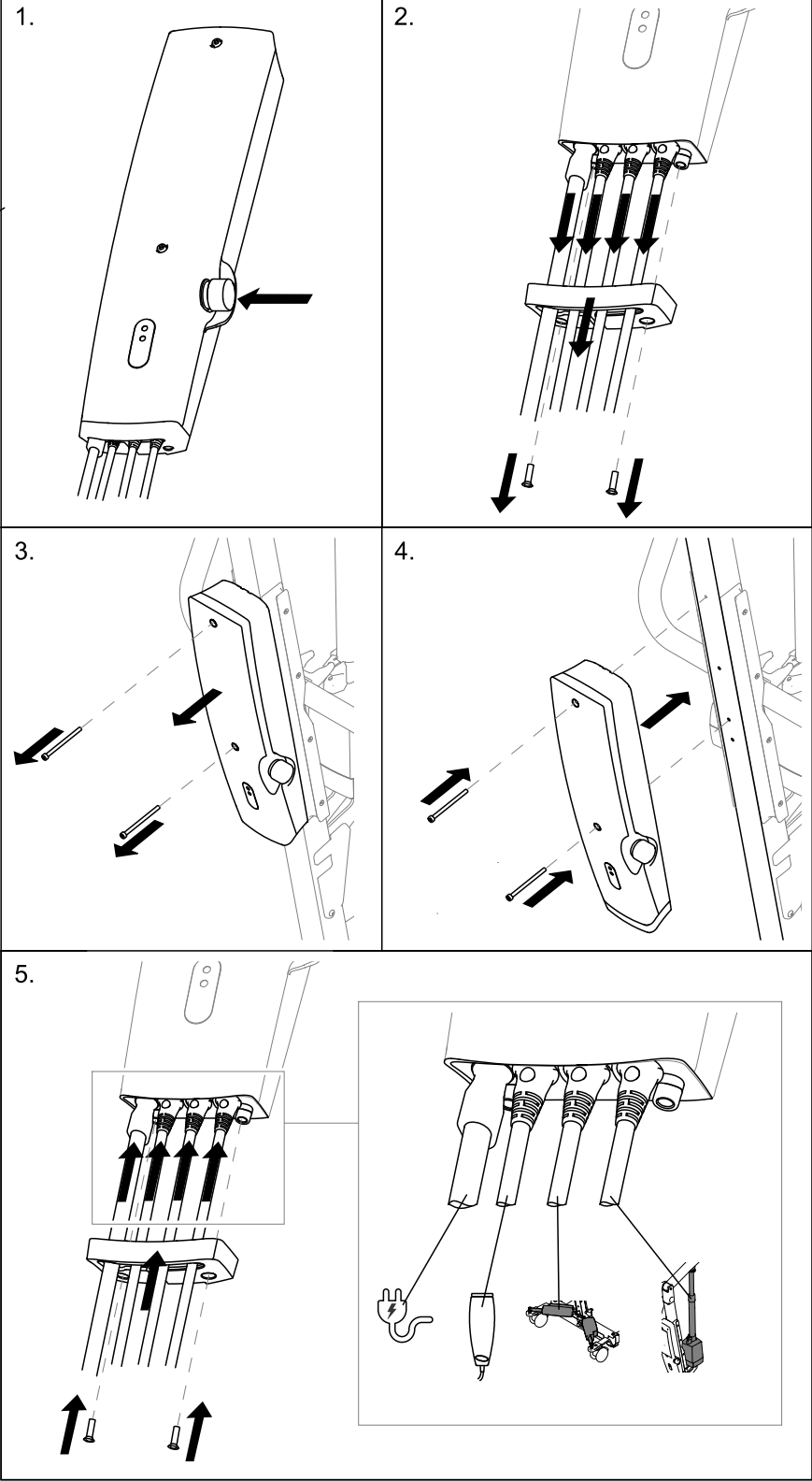
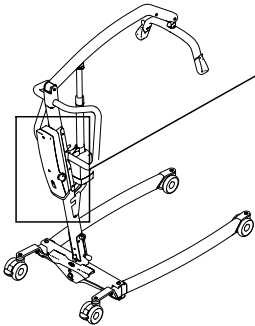
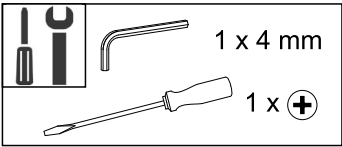
5.14 Replacing the foot pedal and/or rods



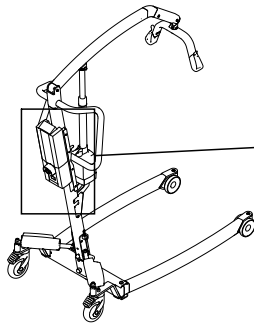
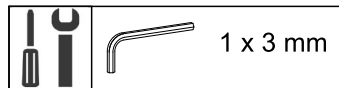
## 5.15 Replacing manual legs



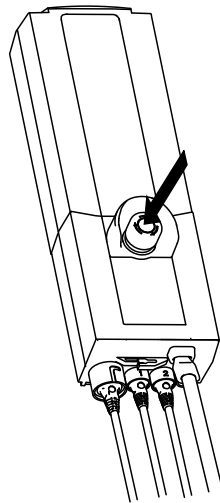
5.16 Replacing the CBJ Home control unit



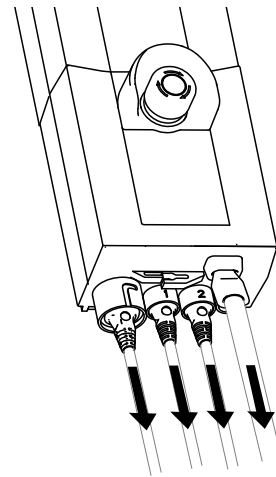
## 5.17 Replacing the CBJ Care, CBJ1 , CBJ2 control unit



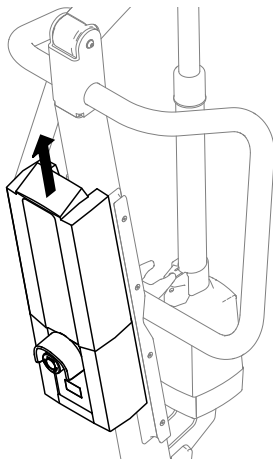
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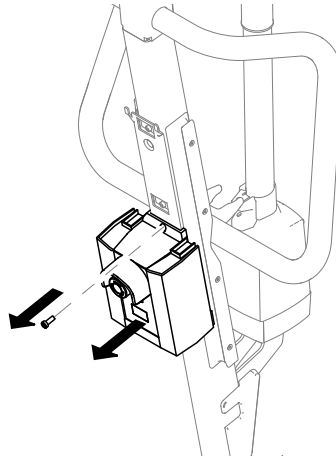
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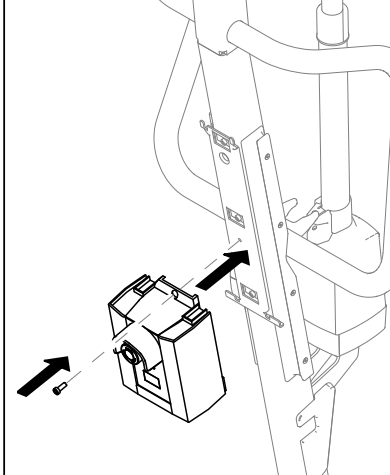
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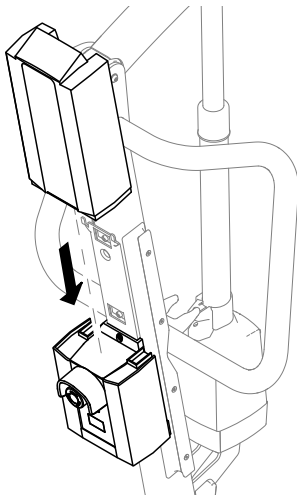
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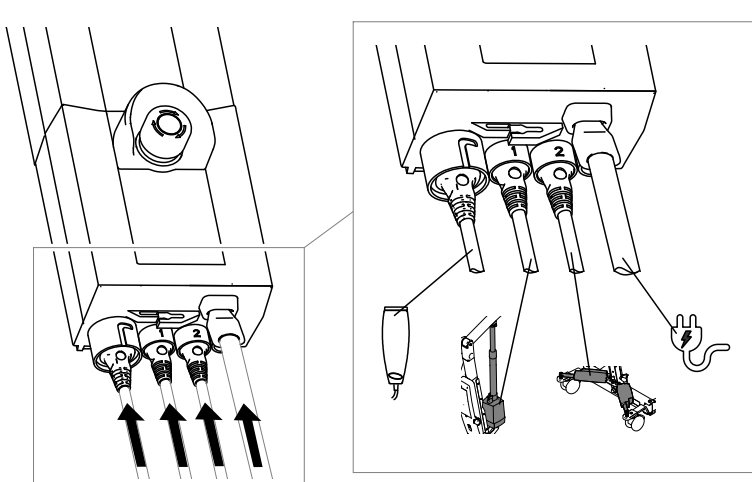
5.



6.

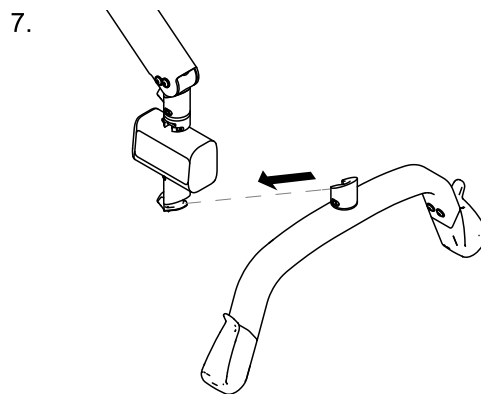
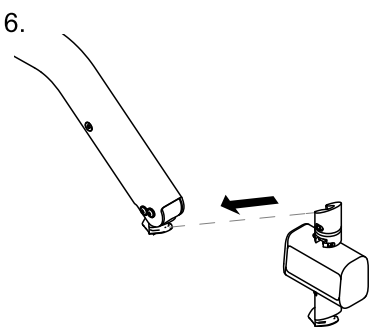
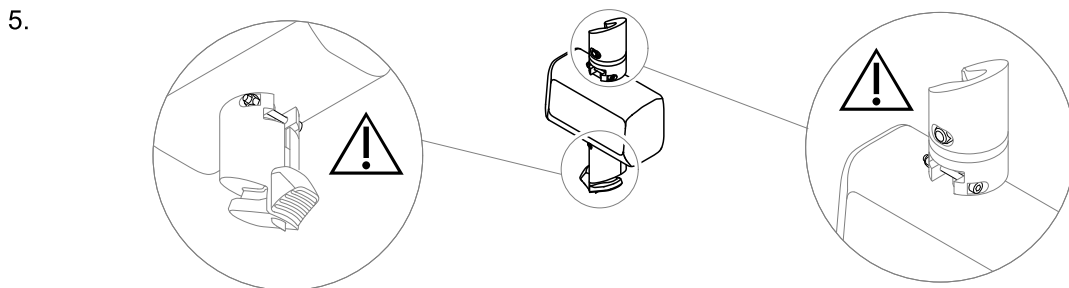
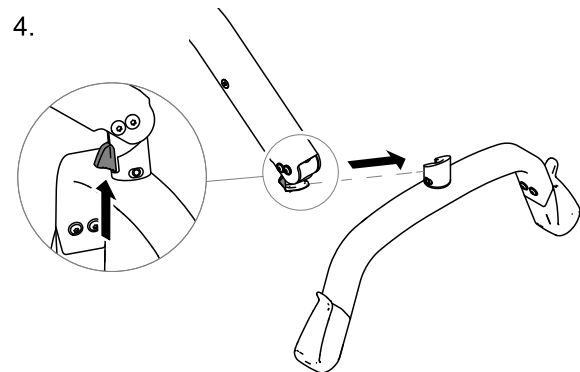
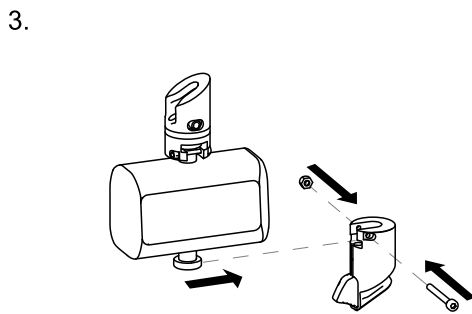
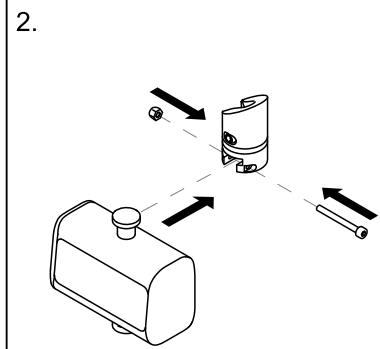
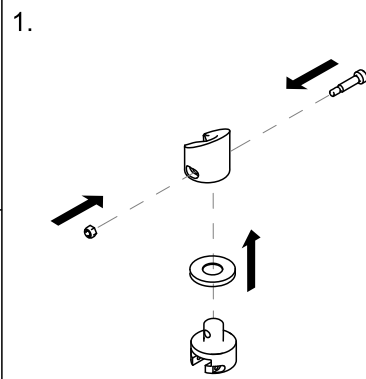
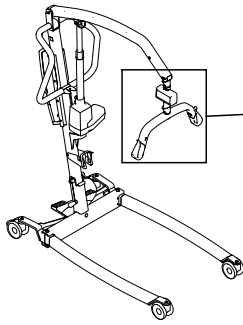
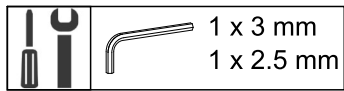


7.

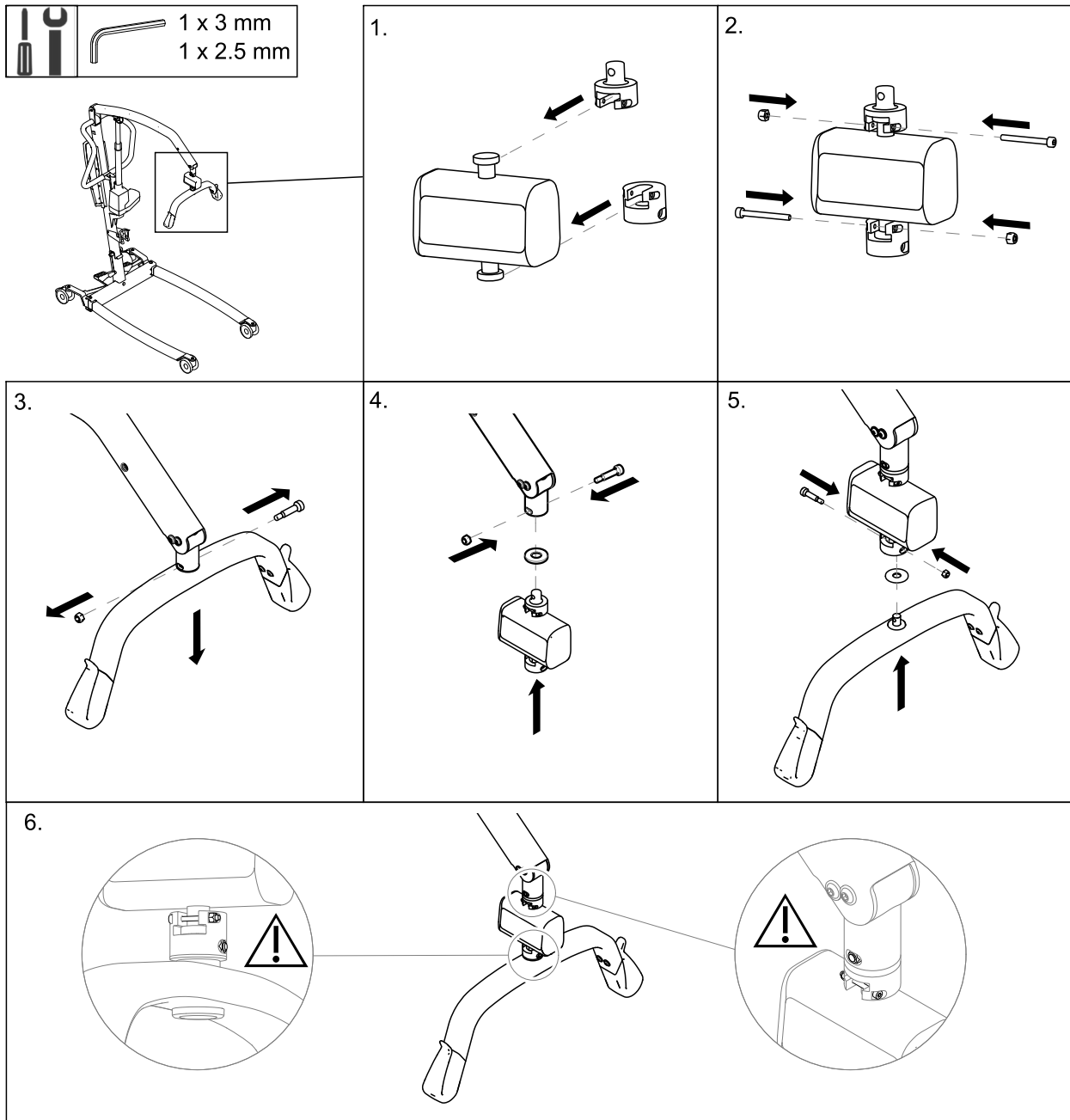




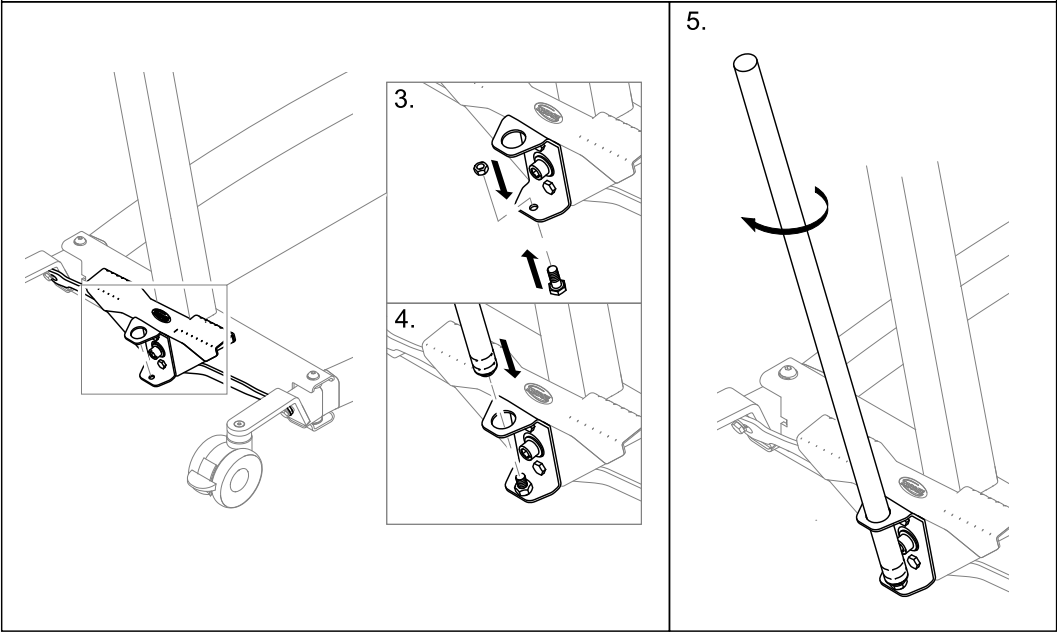
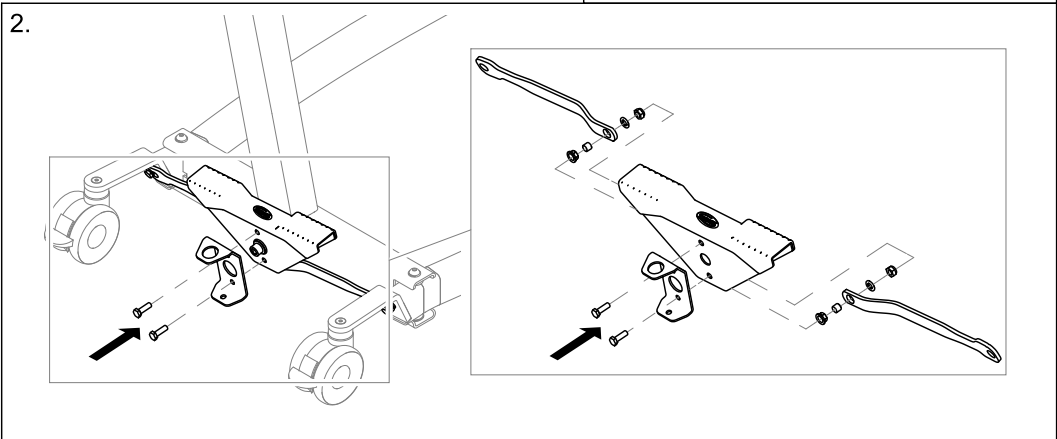
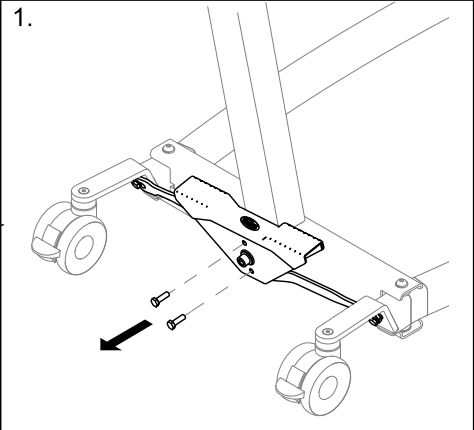
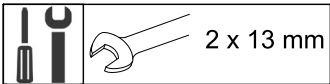
## 5.18 Installing the Wunder RS300 scale with SMARTLOCK®



## 5.19 Installing the Wunder RS300 scale with a fixed spreader bar



5.20 Installing the lever for manual leg spreader



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