

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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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



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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.

Other Symbols

(Not applicable for all manuals)



UK Responsible Person Indicates if a product is not manufactured in the UK.



Triman Indicates recycling and sorting rules (only relevant for France).

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.

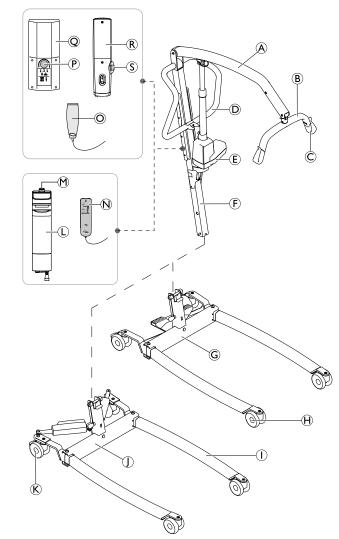
NOTICE!

- 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
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Main parts of the lift

2.2

A	Boom
₿	Spreader bar – with or without SMARTLOCK™
©	Hook for sling
D	Push bar
E	Lifting actuator
Ð	Mast – foldable or fixed
G	Base with foot pedal for manual leg spreader
(\mathbb{H})	Front Castors
()	Leg
D	Base with actuators for electrical leg spreader — with or without actuator covers
ĸ	Rear castors with brake
Û	TC12AC control unit with detachable battery
M	Emergency Stop — TC12AC control unit
N	Hand control compatible with TC12AC control unit
0	Hand control compatible with CBJ Care, CBJ1, CBJ2 and CBJ Home control units
P	Emergency Stop — CBJ Care, CBJ1 and CBJ2 control units
Q	CBJ Care , CBJ1 or CBJ2 control unit with detachable battery
R	CBJ Home control unit with integrated battery
S	Emergency Stop — CBJ Home control unit

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.

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 ± 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.

- $\underbrace{\overset{\circ}{\fbox}}_{\text{IIII}} \quad \begin{array}{l} \text{The service light switches on either after a 12} \\ \text{month period or 8000 cycles (whichever occurs first).} \end{array}$
- 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

INVACARE	Model:	REF / SN number:	1/2
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NOTICE!

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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 [®] Birdie [®] EVO according to ISO 10535	\checkmark	×	Comment		
General inspection	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 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.					
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).					

2/2

INVAC4RE

Model:

REF / SN number:

Checkpoints for Invacare [®] Birdie [®] EVO according to ISO 10535	\checkmark	×	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 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

Pass	🗆 Fail
No safety or functional deficiencies were detected.	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 or 5.1 Disassembling a foldable mast, page 12
	Mast/Boom joint loose.	Check and tighten the Mast/ Boom connection. See 5.11 Replacing the boom, page 18
	Tie - Rods are loose.	Check and tighten the screws of the rods and/ or pedal. See 5.18 Replacing the foot pedal and/or rods, page 25
Castors/Brakes noisy or stiff.	Fluff or debris in bearings.	Replace the castors. See 5.3 Replacing 75 mm castors, page 13 or 5.4 Replacing 100 mm castors, page 13
Noisy or dry sound from pivots.	Pivots are worn or damaged	Replace the pivots. See 5.11 Replacing the boom, page 18, 5.19 Replacing manual legs, page 27, 5.16 Replacing electrical legs without actuator cover, page 23 or 5.17 Replacing electrical legs with actuator cover, page 24
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 5.20 Replacing the CBJ Home control unit, page 28 or 5.21 Replacing the CBJ Care, CBJ1, CBJ2 control unit, page 29
	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 5.10 Replacing the boom actuator, page 17, 5.14 Replacing a leg actuator without cover, page 20 or 5.15 Replacing a leg actuator with cover, page 21
Unusual noise from actuator.	Boom or leg actuator is worn or damaged or spindle is bent.	Replace the actuator. See 5.10 Replacing the boom actuator, page 17, 5.14 Replacing a leg actuator without cover, page 20 or 5.15 Replacing a leg actuator with cover, page 21
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 5.11 Replacing the boom, page 18

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 5.18 Replacing the foot pedal and/or rods, page 25
Damping of the spreader bar has lessened or disappeared completely.	Damper is damaged	Replace the damper. See 5.12 Replacing the damper, page 18
The detachable spreader bar does not fix to the connector on the boom	The locking mechanism is damaged	Replace the spreader bar connector. See 5.12 Replacing the damper, page 18

 $\mathring{\parallel}$ Contact your Invacare provider or representative if the above does not solve your problems.

5 Instructions

4.

5.

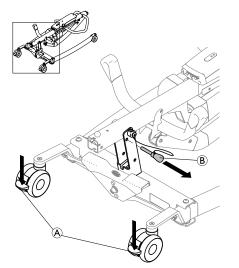
5.1 Disassembling a foldable mast

CAUTION!

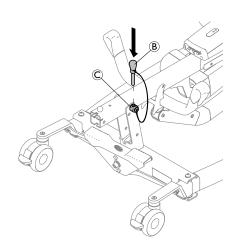
Risk of injury and damage to property Improper handling of heavy parts can cause injury or damage to property.

- Always perform the following procedures with the mast in folded position.
- Assistance may be required to handle heavy parts.
- 1.

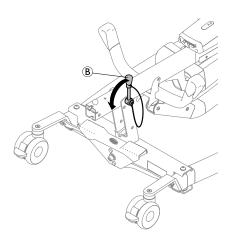
2.



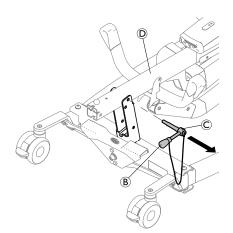
Lock both rear castors (Å) and remove the locking pin (B).



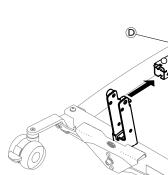
Insert the locking pin ${}^{\textcircled{B}}$ into the hole on the pivot pin $\bigcirc.$



Rotate the locking pin ${}^{\textcircled{B}}$ anti-clockwise to unlock the pivot pin ${}^{\textcircled{C}}$.



Hold the mast-boom assembly \mathbb{D} in position and remove the pivot pin \mathbb{C} with the locking pin \mathbb{B} .



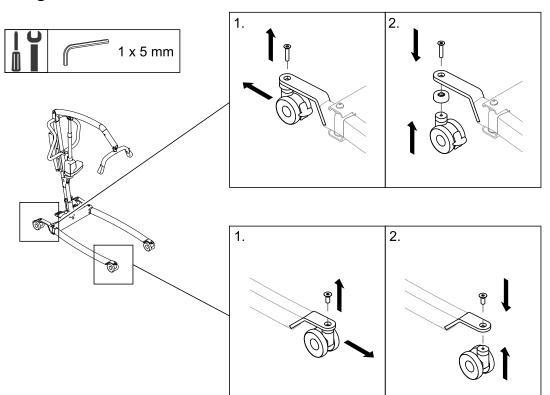
Remove the mast-boom assembly D from the base.

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.

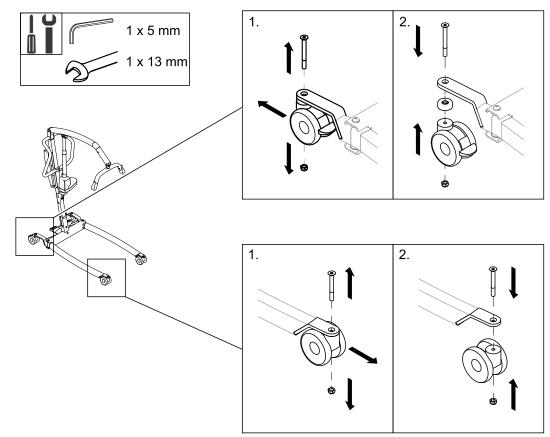
5.2 Assembling a foldable mast

- 1. Reverse the procedure described in 5.1 Disassembling a foldable mast, page 12.
- 2. Check that the pivot pin is completely inserted and properly secured.
- 3. The mast can now be folded upright for usage.

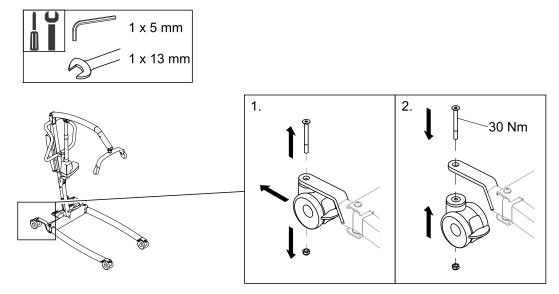
5.3 Replacing 75 mm castors



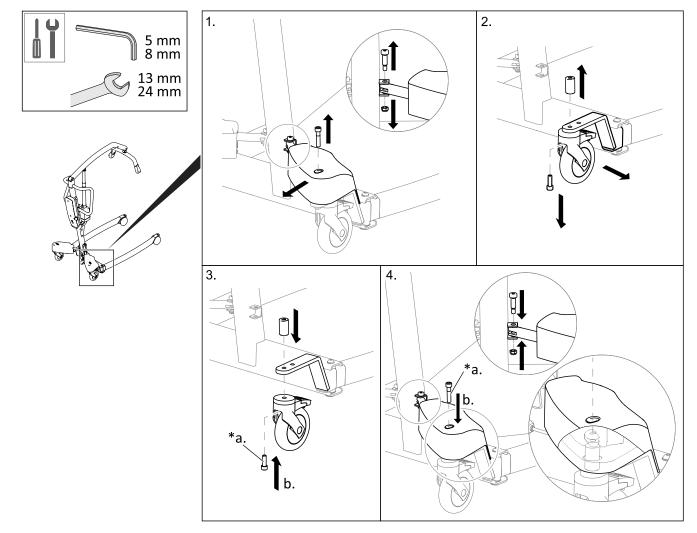
5.4 Replacing 100 mm castors



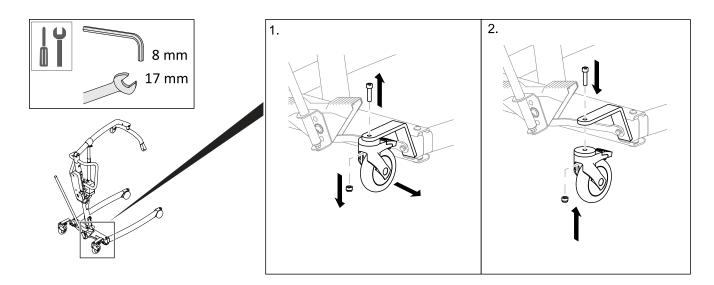
5.5 Replacing 100 mm rear castors with total lock



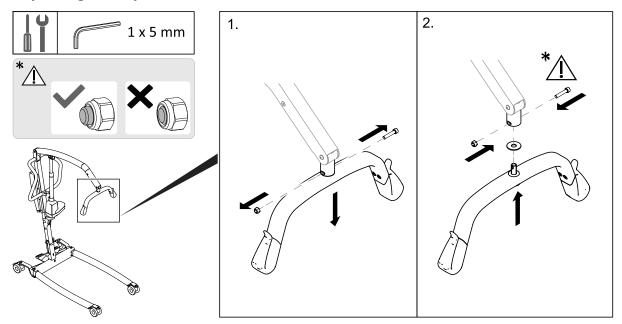
5.6 Replacing 125 mm castors



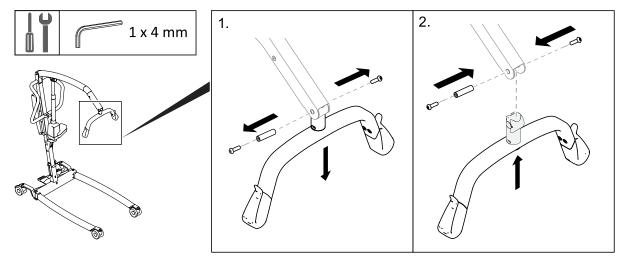
*a. Apply medium strength thread lock.



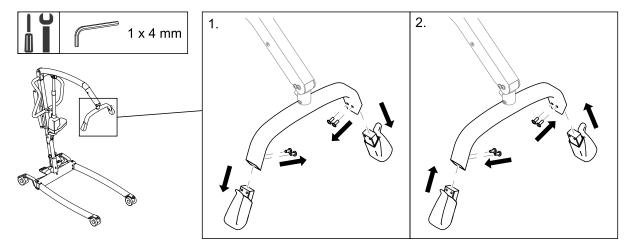
5.7 Replacing the spreader bar



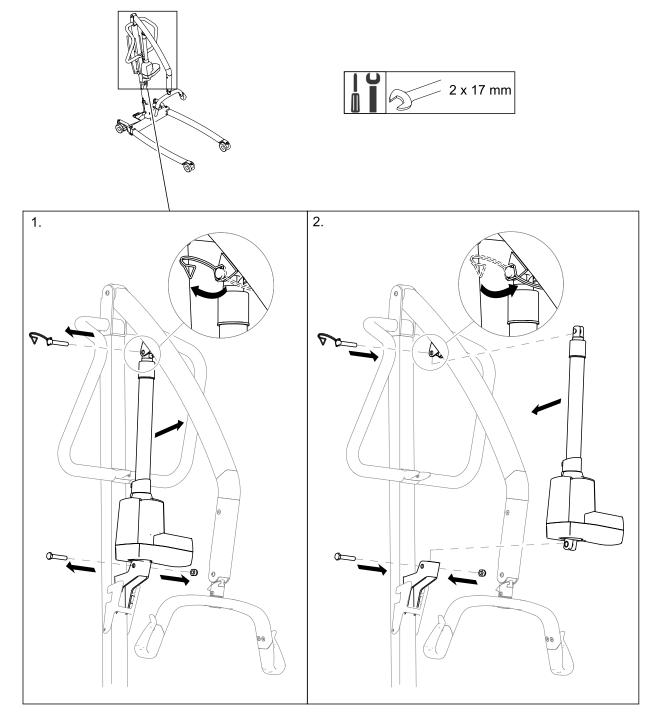
5.8 Replacing the spreader bar with fixation pin



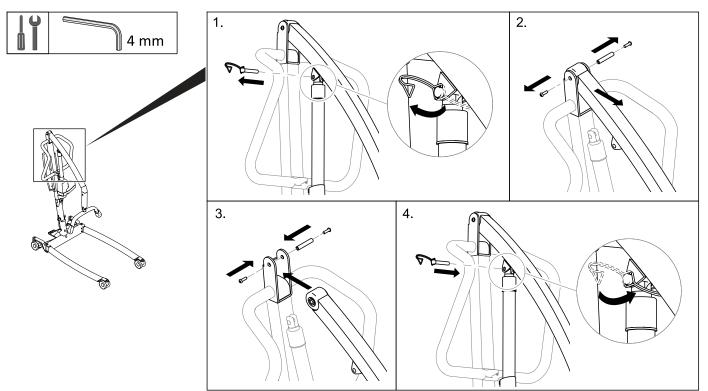
5.9 Replacing the hooks



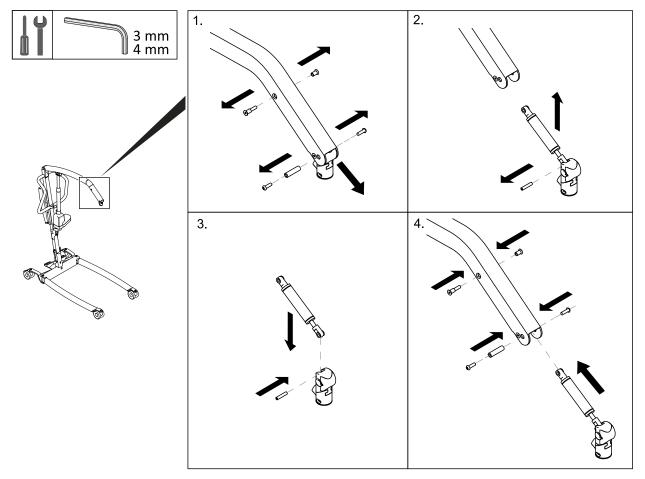
5.10 Replacing the boom actuator



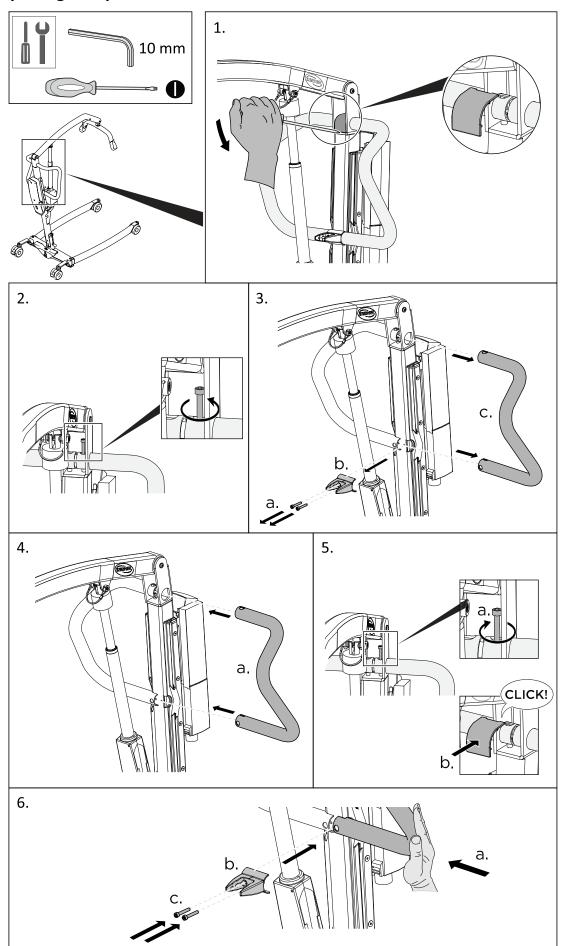
5.11 Replacing the boom



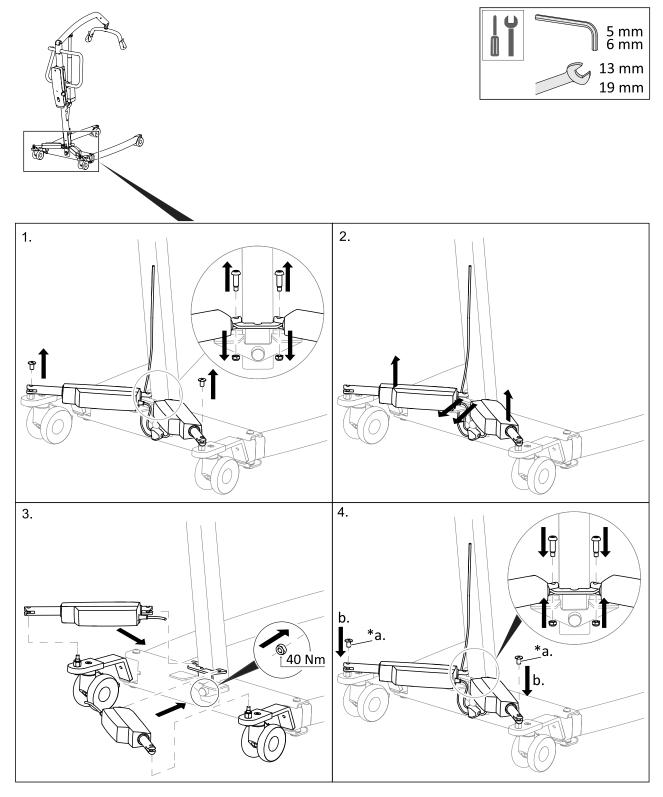
5.12 Replacing the damper



5.13 Replacing the push bars

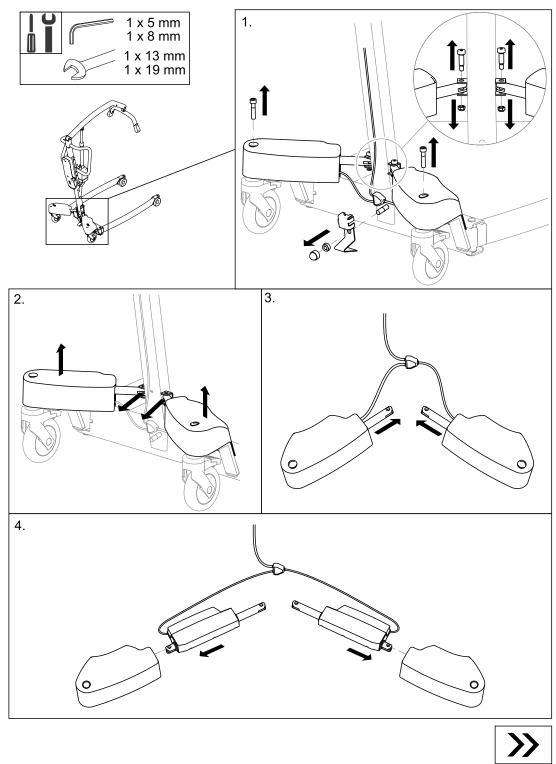


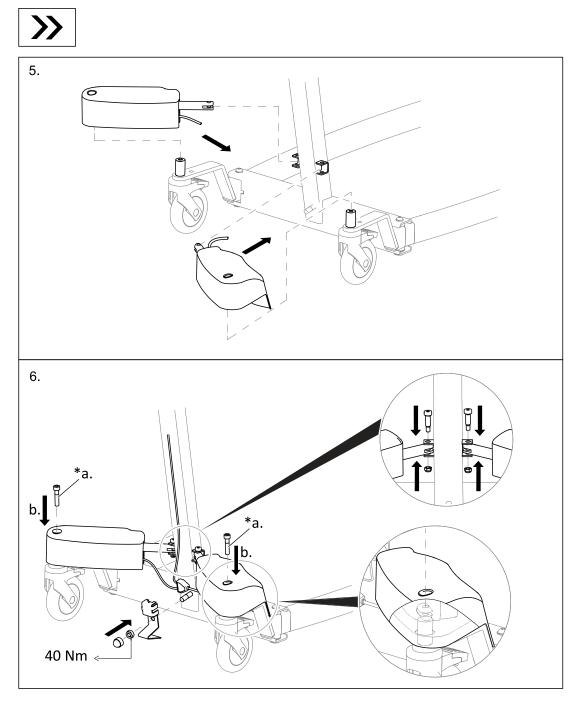
5.14 Replacing a leg actuator without cover



*a. Apply medium strength thread lock.

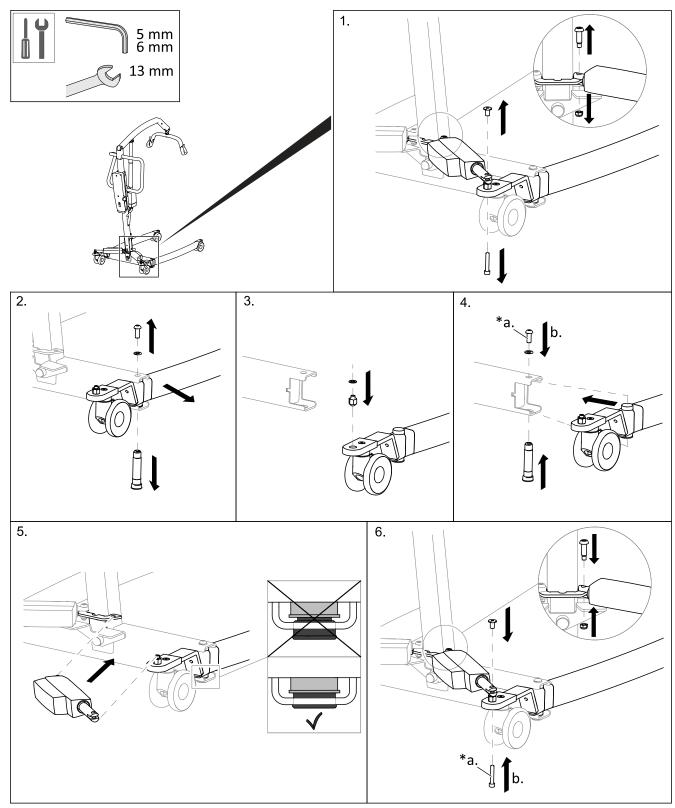
5.15 Replacing a leg actuator with cover





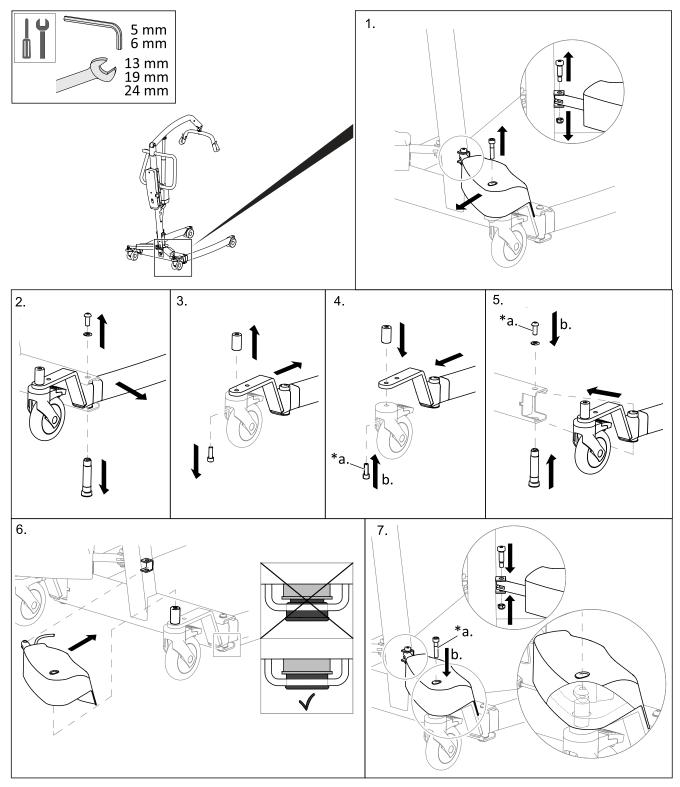
*a. Apply medium strength thread lock.

5.16 Replacing electrical legs without actuator cover



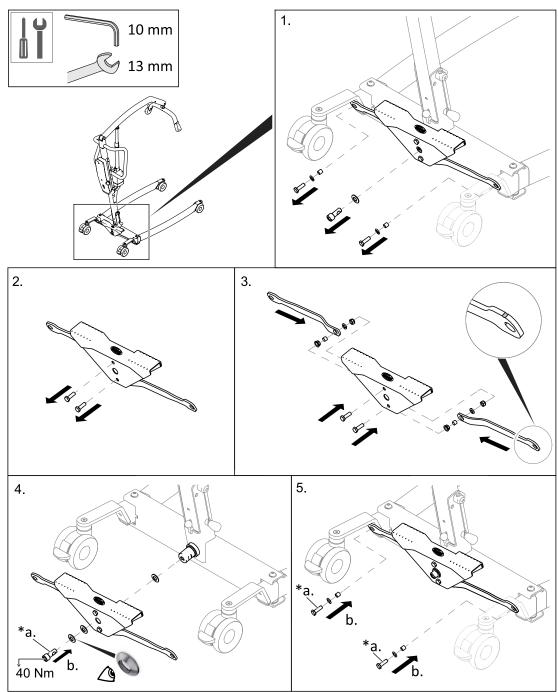
***a.** Apply medium strength thread lock.

5.17 Replacing electrical legs with actuator cover



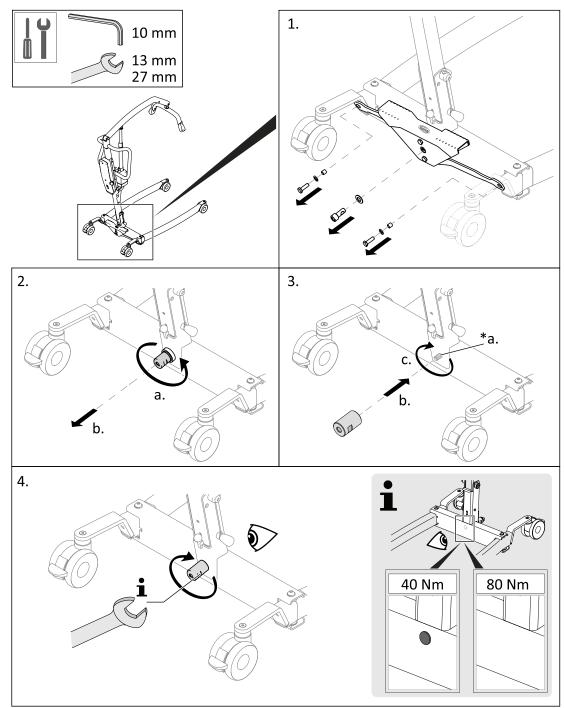
*a. Apply medium strength thread lock.

5.18 Replacing the foot pedal and/or rods



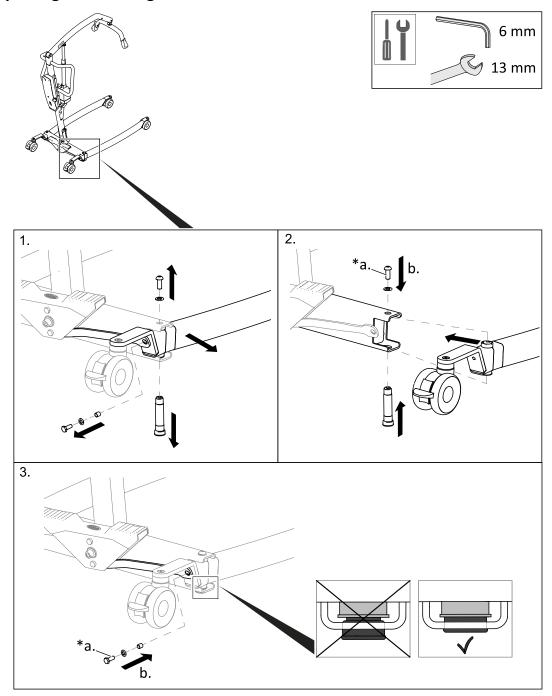
*a. Apply medium strength thread lock.

5.18.1 Replacing the pedal axle



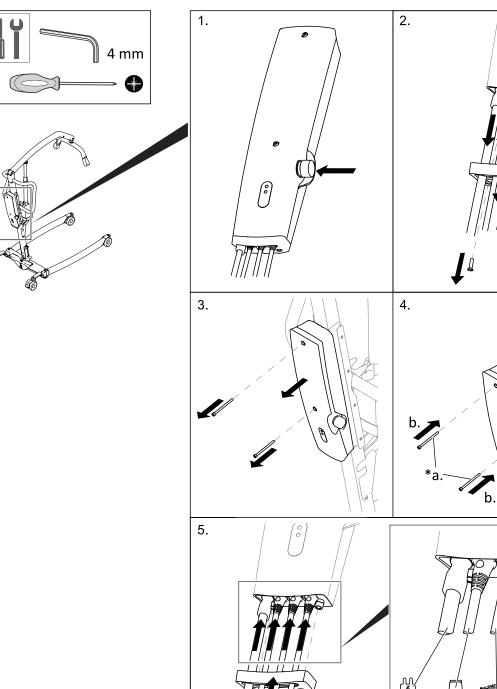
*a. Apply medium strength thread lock.

5.19 Replacing manual legs



*a. Apply medium strength thread lock.

5.20 Replacing the CBJ Home control unit



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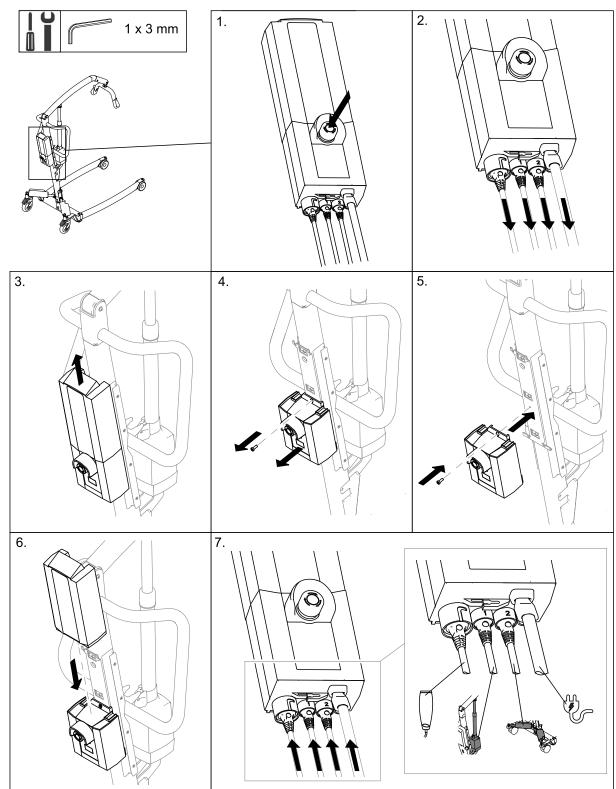
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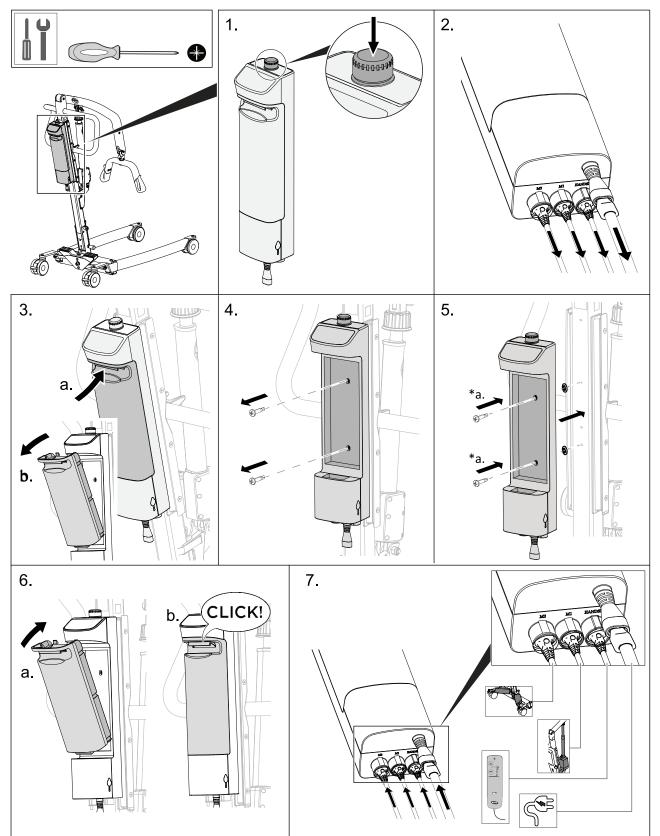
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*a. Apply medium strength thread lock.

5.21 Replacing the CBJ Care, CBJ1 , CBJ2 control unit

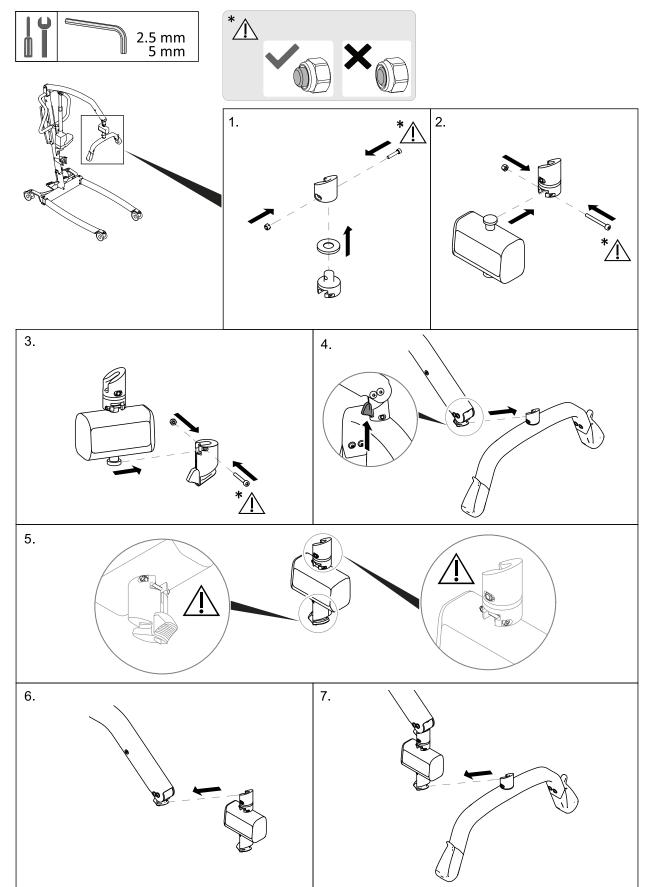




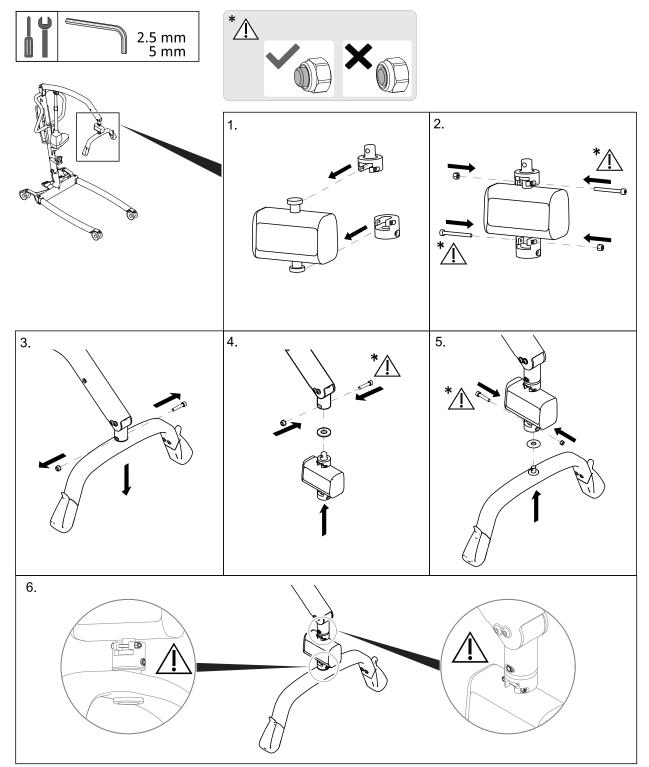


*a. Apply medium strength thread lock.

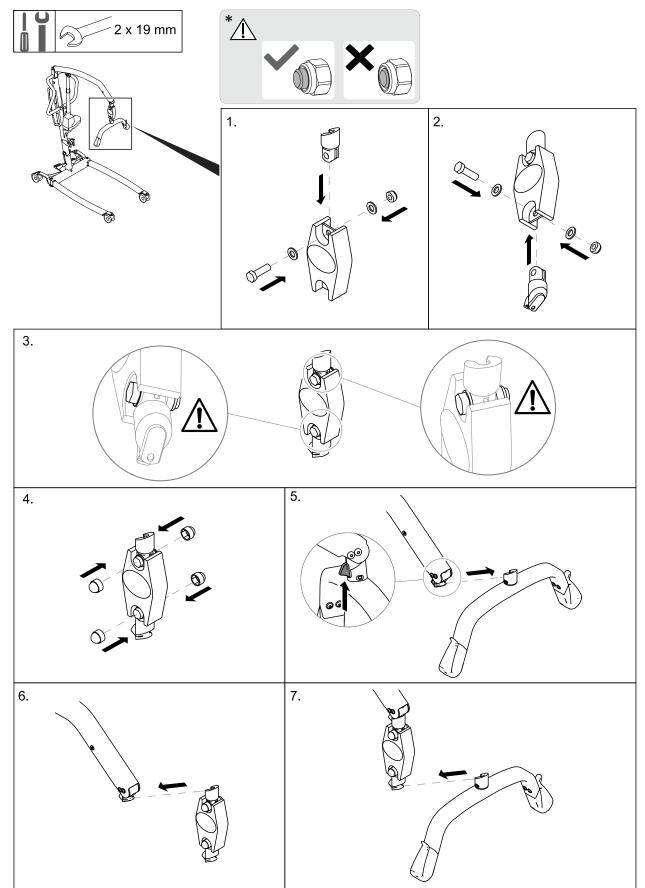
5.23 Installing the Wunder RS300 scale with SMARTLOCK®



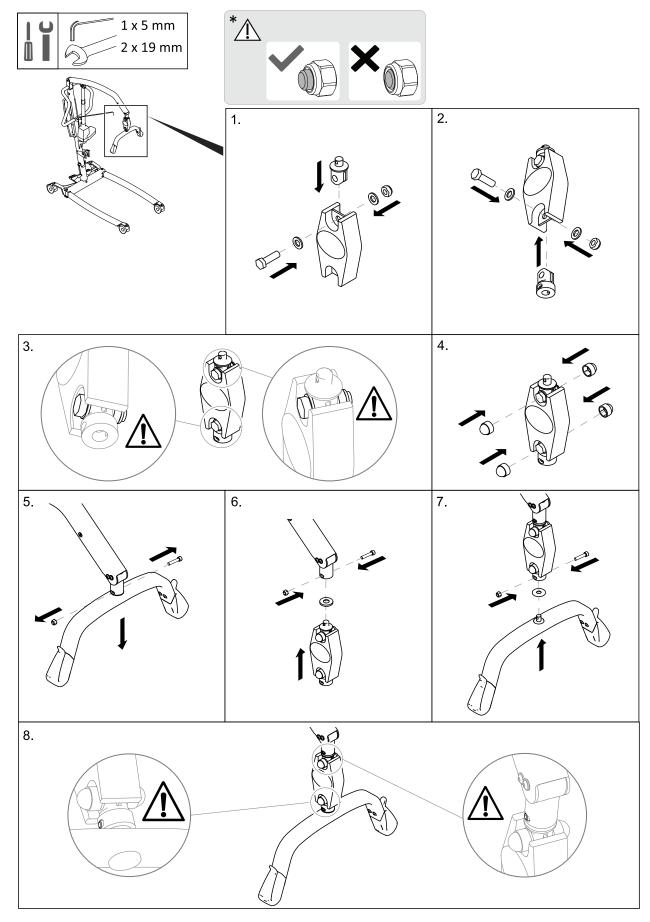
5.24 Installing the Wunder RS300 scale with a fixed spreader bar



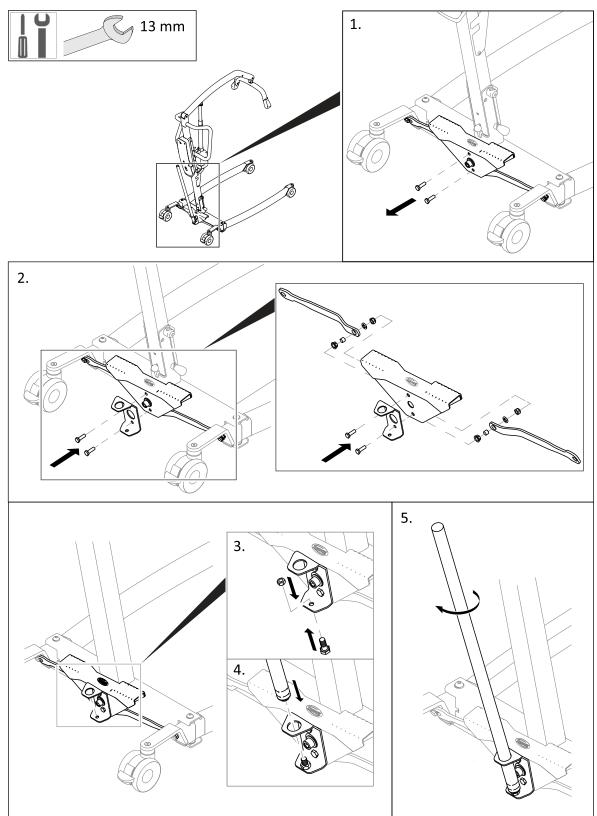
5.25 Installing the Wunder CR200 scale with SMARTLOCK®



5.26 Installing the Wunder CR200 scale with a fixed spreader bar



5.27 Installing the lever for manual leg spreader





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