

Periodic Inspection

Liko™ mobile lifts
Liko™ sit-to-stand lifts

3EN371001 Rev. 4



Valid for following lifts: Viking™, Golvo™, Uno™, Liko™ M220/230, LikoLight™, Sabina™, RollOn™.

Lift information		Customer reference	
Lift:		Agreement No:	
Product Number:		Name:	
Serial Number:		Address:	
Production year:		Post Code	

△ Liko™ lifts must be thoroughly inspected when the Service Light at the Control Unit illuminates (if applicable) or at least once per year. Inspection and service must be carried out by Hill-Rom authorized personnel.

To track how the lift has been used, write down the values from the control unit (if applicable):



Control Unit CBL

If Liko Service System (LSS) or Liko Diagnostic System (LDS) are available, data can be read from lifts equipped with Control Unit CBL. LSS store data and LDS show data, write down the values in the boxes below.

TAAxT

	Ah
--	----



Control Unit Jumbo Care

From the display, write down the values in the boxes below.



	As
--	----

Total work, lifting actuator (As)



--

Total lifting actuator cycles

Expected life

Control Unit CBL:

Viking™ M	mobile lift	700 Ah
Viking™ L	mobile lift	910 Ah
Viking™ XL	mobile lift	1020 Ah
Golvo™ 8/88	mobile lift	700 Ah

Control Unit Jumbo Care:

Viking™ M	mobile lift	2 520 000 As
Viking™ L	mobile lift	3 276 000 As
Viking™ XL	mobile lift	3 672 000 As
Golvo™ 9000	mobile lift	2 520 000 As

If the control unit is replaced the total Ah or As will show correct values for the control unit but not for the mobile lift. The mobile lift has an expected service life of 10 years when correctly handled.

Inspection sign off

Complete inspection according to Instructions for the check points (page 3-9), fill in page 2 and sign below.

Approval to use the mobile lift Approved Not approved

If the mobile lift has one or more inspection points "Not approved", the lift must not be used.

To be actioned: Actions according to the "INSPECTION ITEMS NOT APPROVED" should be performed immediately. After performed actions sign below. If anything is unclear or if you have questions, please contact Hill-Rom or your local Hill-Rom representative. Contact information is to be found at www.hill-rom.com.

Inspection performed by:		Date:	
Next inspection:			

Inspection performed in accordance with ISO 10535:2006 Annex B- Periodic inspection

△ In this document, this warning symbol indicates that special care should be taken. If instructions are not followed there is a risk of serious injury.

Enhancing outcomes for patients and their caregivers:



Inspection protocol: Liko™ mobile lifts and Liko™ sit-to-stand lifts

INSPECTION POINTS		Action required:	Approved	Not approved
1	Product decal			
2	General inspection			
3	Castors - Wheels*			
4	Base			
5	Lift arm* <i>Not applicable for RollOn™</i>			
6	SlingBar* <i>Not applicable for RollOn™</i>			
7	Actuator, mast <i>Not applicable for RollOn™</i>			
8	Battery, cables and charging <i>Not applicable for RollOn™</i>			
9	Hand control <i>Not applicable for RollOn™</i>			
10	Emergency stop <i>Not applicable for RollOn™</i>			
11	Electrical emergency lowering device <i>Not applicable for RollOn™</i>			
12	Lift strap <i>Only applicable for Golvo™</i>			

ACCESSORY		N/A	Action required:	Approved	Not approved
13	Armrest <i>Not applicable for RollOn™</i>				
14	Leg Support <i>Only valid for RollOn™</i>				

LOAD TESTING		Max Load applied:		Approved	Not approved
<i>Not applicable for RollOn™</i>					
15	Mast maximum load	Kg:	Lbs:		
	Base maximum load	Kg:	Lbs:		
	Mechanical Emergency lowering maximum load	Kg:	Lbs:		
	Armrest Maximum load (if applicable)	Kg:	Lbs:		

Clear service (if applicable)		N/A	Action required:	Approved	Not approved
16	Service Symbol reset				

* Required Measurements:	Measured dimensions:		Approved	Not approved
3 Castor/Wheels: Distance between wheel and floor Leg widening play	mm:	Inch:		
	mm:	Inch:		
5 Liftarm: Top of mast ears.	mm:	Inch:		
6 SlingBar: Gap SlingBar Liko™ M220/230	mm:	Inch:		



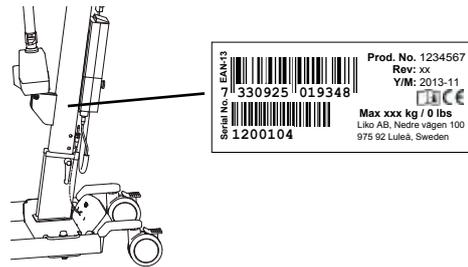
NOTE! Periodic Inspection require inspection sign off on front page

Instructions for the check points

Liko™ mobile lifts & Liko™ sit-to-stand lifts

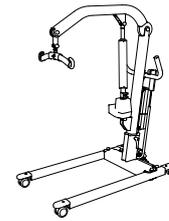
1 Product Decal

- Verify presence of Product Decal with model type and serial number.

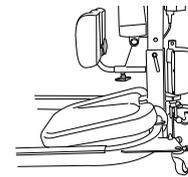


2 General inspection

- Check for scratches, dents, sharp edges, deformities or unusual surface wear.
- Verify that the protective plastic covers are secure.
- Loosen and re tighten all locking handles. Verify that threads are not damaged or binding.
- Pull the lift by the handles and make sure the handles is fixed to the mast.

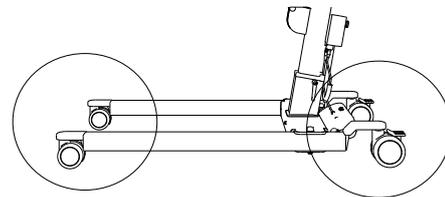


- Sabina™: On mast, inspect weld at leg support tube, vinyl cushion cover for rips/tears and buckles for secure snap-fit within shin support strap.



3 Castors - Wheels

- Roll the lift along the floor. Check to ensure that all wheels roll and turn freely.
- Make sure the wheels are fastened.
- Lock the brakes, make sure the wheels do not turn and the housing does not swivel when the lift is pushed.
- There should not be any play between the fork and the wheel nut.

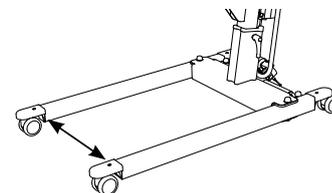


Uno™ 100 from S/N 7 092 716

Uno™ 102 S/N 41 551- 51 999

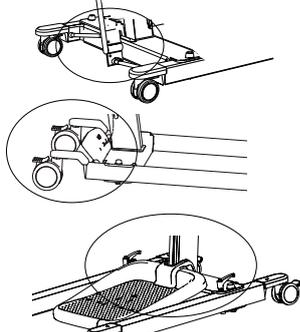
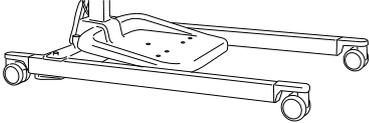
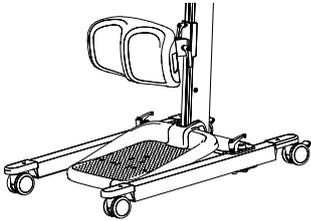
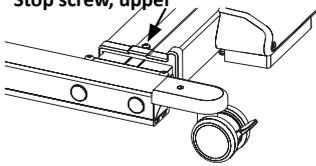
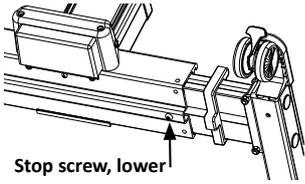
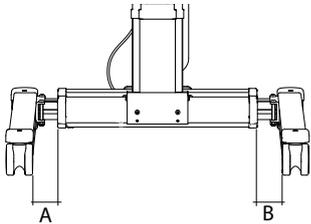
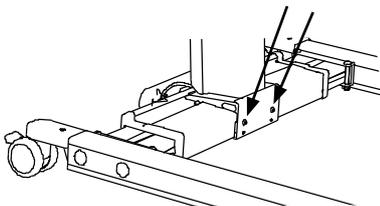
Sabina™ II:

- Roll the lift along a level floor surface and check to ensure that the distance between the wheels and the floor does not exceed 6 mm / 0.24 Inch.
- Leg widening play: With the legs in the inner position Push the legs by hand in and out. The difference in the measurements should not exceed 35 mm / 1.38 Inch total.



Instructions for the check points

Liko™ mobile lifts & Liko™ sit-to-stand lifts

4 Base	
<ul style="list-style-type: none"> Inspect the base widening mechanism. Open and close the base to maximum and minimum positions. Make a functional check of the base widening. Make sure all screws and nuts are tightened. 	
<p>Sabina™ and RollOn™ foot tray:</p> <ul style="list-style-type: none"> Inspect the foot tray for cracks and secure fit on the metal frame. Verify that the foot frame is fixed securely on base. 	
<p>RollOn™</p> <ul style="list-style-type: none"> Verify that upper and lower locking knobs are tight. Make sure the four screws on the plate at the back of the leg support is tight. Inspect cushion cover for rips/ tears 	
<p>Golvo™ If applicable: Stop screw, upper</p> <ul style="list-style-type: none"> Verify that the M6x8 Ezloc stop screw is secured with a square nut inside the middle beam. <p><i>Applicable for Golvo produced from Dec. 2014 and for Golvo with middle beam replaced with spare part 20090094 or 20090095, Middle Beam Golvo.</i></p>	<p>Stop screw, upper</p> 
<p>Golvo™ Stop screw, lower</p> <ul style="list-style-type: none"> Verify that the K6S M8x16 screw is secured with a nyloc nut inside the middle beam. 	 <p>Stop screw, lower</p>
<p>Golvo™</p> <ul style="list-style-type: none"> The distance A & B must be the same. 	
<p>Golvo™</p> <ul style="list-style-type: none"> Verify that both locking screws are tight in base. In the upper holes on the mast. <p><i>Note! Do not place any screws in the lower holes!</i></p>	

Instructions for the check points

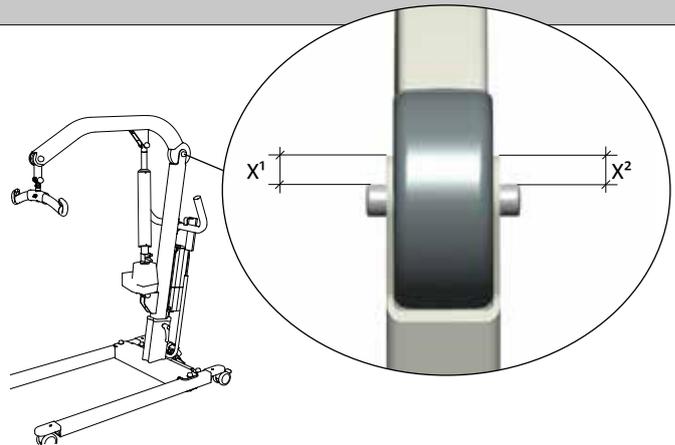
Liko™ mobile lifts & Liko™ sit-to-stand lifts

5 Lift Arm

- Run the lift arm a full lifting cycle without load and make sure the arm is not binding and moves freely. If the arm is binding the mounting screw is too tight.
- Make sure the holes in the mast are not deformed on:

Product	Product No.
Viking™ XL mobile lift	2040003
Viking™ L mobile lift	2040004
Viking™ M mobile lift	2040005
Viking™ S mobile lift	2040006
Viking™ XS mobile lift	2040007

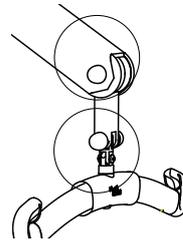
Verify that the holes in the mast are not deformed by measuring the distance from cover hat, to top of the "ear". The distance should be the same on each side ($X^1=X^2$) ± 1 mm/0,04 inch.



Flexlink

With the sling bar hanging in its lowest position:

- Manually raise the sling bar and link arm. Verify that the link arm lowers and raises freely.
- Manually pivot the sling bar side to side. Verify that the flexlink arm raises freely.
- If the link is binding the screw is too tight.



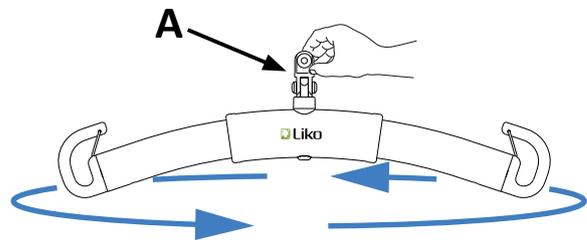
LikoLight™:

- Inspect the welding between arm and fastening device, for deformation or cracks.



6 SlingBar

- Check that the unit rotates freely on its bearings. Make sure the sling bar doesn't rotate unevenly, wobble or the spinning stops due to high friction. (Not applicable on Sabina and RollOn)
- Make sure that both latches are mounted and fall back against the body of the sling bar.
- Check that the sling bar is correctly fastened.
- Make sure there are no deformities in the attachment points (A).



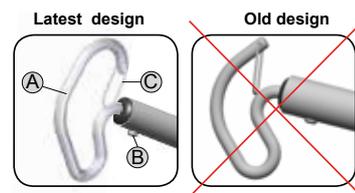
Liko™ M220/M230:

- Measure the area shown, make sure the gap not exceeds 3 mm (1/8 inch).



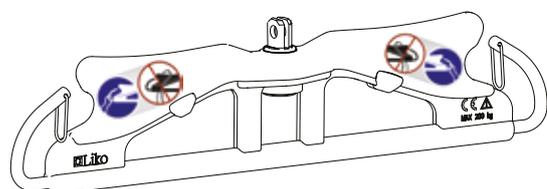
Sabina™:

- Make sure the lift is equipped with latest version of Lift Hooks (A)
- Inspect Lift hook screws and locking washers (B). Make sure they are tightened.
- Make sure that latches (C) are mounted.



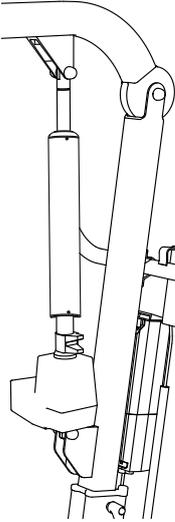
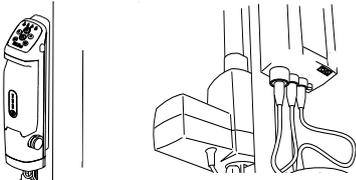
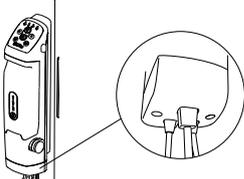
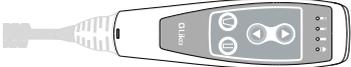
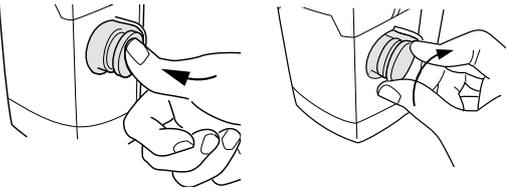
SlingBar Standard:

- Verify that the o-ring is present and positioned in the center bolt groove.
- Check that the unit rotates freely on its bearings. Make sure that both latches are mounted and fall back against the body of the sling bar.
- Make sure the SlingBar cover is attached to the sling bar.



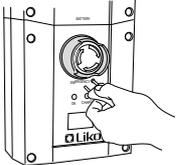
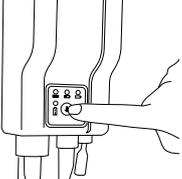
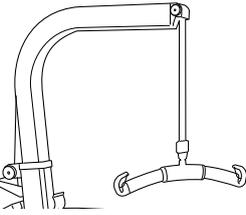
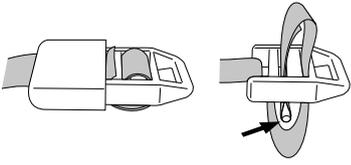
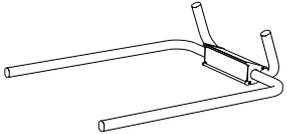
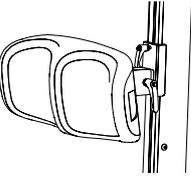
Instructions for the check points

Liko™ mobile lifts & Liko™ sit-to-stand lifts

7 Actuator	
<ul style="list-style-type: none"> • Verify that the upper and lower actuator fasteners to the mast are tight. • Visually inspect the actuator • Check of abnormal noise. • If the lift is equipped with Outer tube: Run the lift arm to the highest position. Pull the Outer Tube to the top and bottom, make sure the Outer Tube does not get stuck in any position. • Check of electric end stop: Viking™ Prod. No. 2040003-2040005, Sabina™ 200 and Viking™ Prod. No. 2040013-2040015, 2040033-2040035 and 2040045: Run the lift all the way up and down. Verify that the indicator lamp for overload not lights up. • Uno™200, Inspect the micro switch in LA31: By using the Service box SB001 (21090013 (EU), 21090014 (UK), 21090015 (US)). The enclosed adapter cable (enclosed with SB001), shall be inserted in socket-outlet marked "g" in Linak A/S User and ordering manual for SB001 (MA-M9-02-192-B). 	
8 Battery, cables and charging	
<ul style="list-style-type: none"> • Verify that all cables are properly inserted. Re-insert if uncertain. • Verify battery charge by inspecting the charger indicator. • Check cables and connectors for damage or wear. 	
<p>CBL20 control unit</p> <ul style="list-style-type: none"> • Inspect that the cable cover is mounted correctly. 	
9 Hand Control	
<ul style="list-style-type: none"> • With the emergency stop out, verify that all functions on the hand control are working. 	
<ul style="list-style-type: none"> • Mobile lifts equipped with CBL control unit: With the emergency stop out, verify that all functions on the operation panel are working 	 <p style="text-align: right;">CBL</p>
10 Emergency stop	
<ul style="list-style-type: none"> • Press the emergency stop button. With the emergency stop pressed in, verify the lift does not operate with the hand control buttons. • Turn the red emergency button in the direction of the arrows. Verify the button releases from the locked position into the raised, open position. 	

Instructions for the check points

Liko™ mobile lifts & Liko™ sit-to-stand lifts

11 Electrical emergency lowering device	
<ul style="list-style-type: none"> With the emergency stop out, verify that the electrical emergency-lowering device functions. 	 <p>Jumbo Jumbo Care</p>  <p>CBL</p>  <p>Control Unit Viking S/XS</p>
12  Lift Strap (Golvo™)	
<ul style="list-style-type: none"> Using the hand control, lower the strap to it's maximum extension. Inspect the strap for frayed edges, heavy wrinkles or wear through areas. 	
<ul style="list-style-type: none"> Verify that Lift strap joint is secure on strap. Slide plastic cover off the Lift strap joint and visually inspect that the lift strap safety pin is seated secure in the middle recess of the Q-link. 	
13 Armrest (accessory on some models)	
<ul style="list-style-type: none"> Verify that both arms rotate freely and hang vertically when not in use. Rotate arms to horizontal position. Press the armrest down, they should stay in raised position when pushed down. 	
14 Leg support (RollOn™)	
<p>RollOn™ leg support:</p> <ul style="list-style-type: none"> Verify that upper and lower locking knobs are tight. Make sure the four screws on the plate at the back of the leg support is tight. Inspect cushion cover for rips/ tears 	

Instructions for the check points

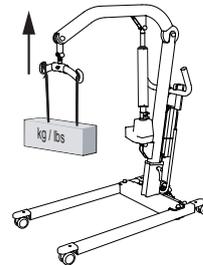
Liko™ mobile lifts & Liko™ sit-to-stand lifts

15 Load Testing

⚠ **All handling of heavy weights can pose a risk. Ensure that weights are securely fastened before lifting.**
Attach the test load so that the weight is evenly distributed over all sling bar attachment points.
Ensure that the sling bar is level when lifting.
 A new actuator may require up to 20 lifting cycles before reaching specified capacity.

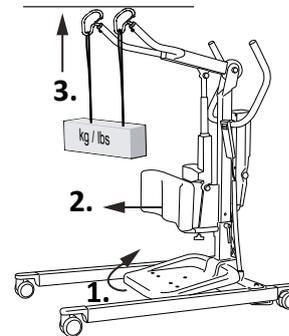
Liko™ mobile lifts:

- Run the lift with maximum load $\pm 5\%$, all the way up, according to the picture.
NOTE: Make sure Uno™ 200 has the actuator mounted in the alternative allowing maximum load.
- Run the base in and out with maximum load*.
NOTE: *GOLVO™ BASE LOAD TEST WITH 50 KG/110 Lbs.
 Make sure all four wheels have contact with the floor.
- Listen for abnormal noises and vibrations.



Sabina™ sit-to-stand lift:

- Remove the footframe/footplate (1) and kneesupport (2).
- Apply the specified Test load*. Make sure the load is hanging straight down from the lift hooks, so they don't bend.
- Run the lift with specified Test load* according to the picture (3). The load must elevate from the floor.
NOTE! Make sure the load don't touch the frame or the actuator.
- Run the base in and out with specified Test load*.
 Make sure all four wheels have contact with the floor.
- Listen for abnormal noises and vibrations.
- Reassemble the footframe/footplate and kneesupport.

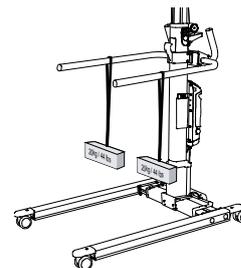


*Test load:

Sabina II:	Sabina 200:
150kg / 330lbs	120 kg / 265 lbs

• Armrest:

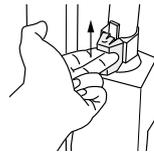
Rotate arms to raised position, load the armrest with 20 kg (44 lbs)/arm. Place the load in the middle of the arms.



Instructions for the check points

Liko™ mobile lifts & Liko™ sit-to-stand lifts

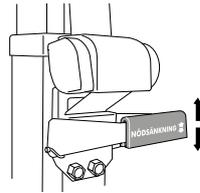
- Mechanical emergency lowering load test (Not Sabina™ 200)**
 Raise with minimum 50 kg (110 lbs) until the load hangs freely, about 50 mm (2 inch)



Lift red emergency handle on the actuator upwards and hold, verify that the load lowers.



Manually turn the red actuator collar in the direction of the arrows to lower.



Emergency lower by moving the handle up and down. Repeat the motion until the load/weight is lowered to the ground

16 Service symbol reset

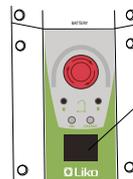
When the Periodic Inspection has been performed, reset service indicator where applicable, according to instructions "Reset Service Interval Parameters" in the Service Manual.

- Products with Control Unit CBL20.



Service indicator (orange light), illuminates when service is needed.

- Products with control box Jumbo Care.



Service indicator (orange light)
 The display will show the service symbol and one single beep will tell that it's time for service.



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Enhancing outcomes for
patients and their caregivers:

