

Sabina™ II

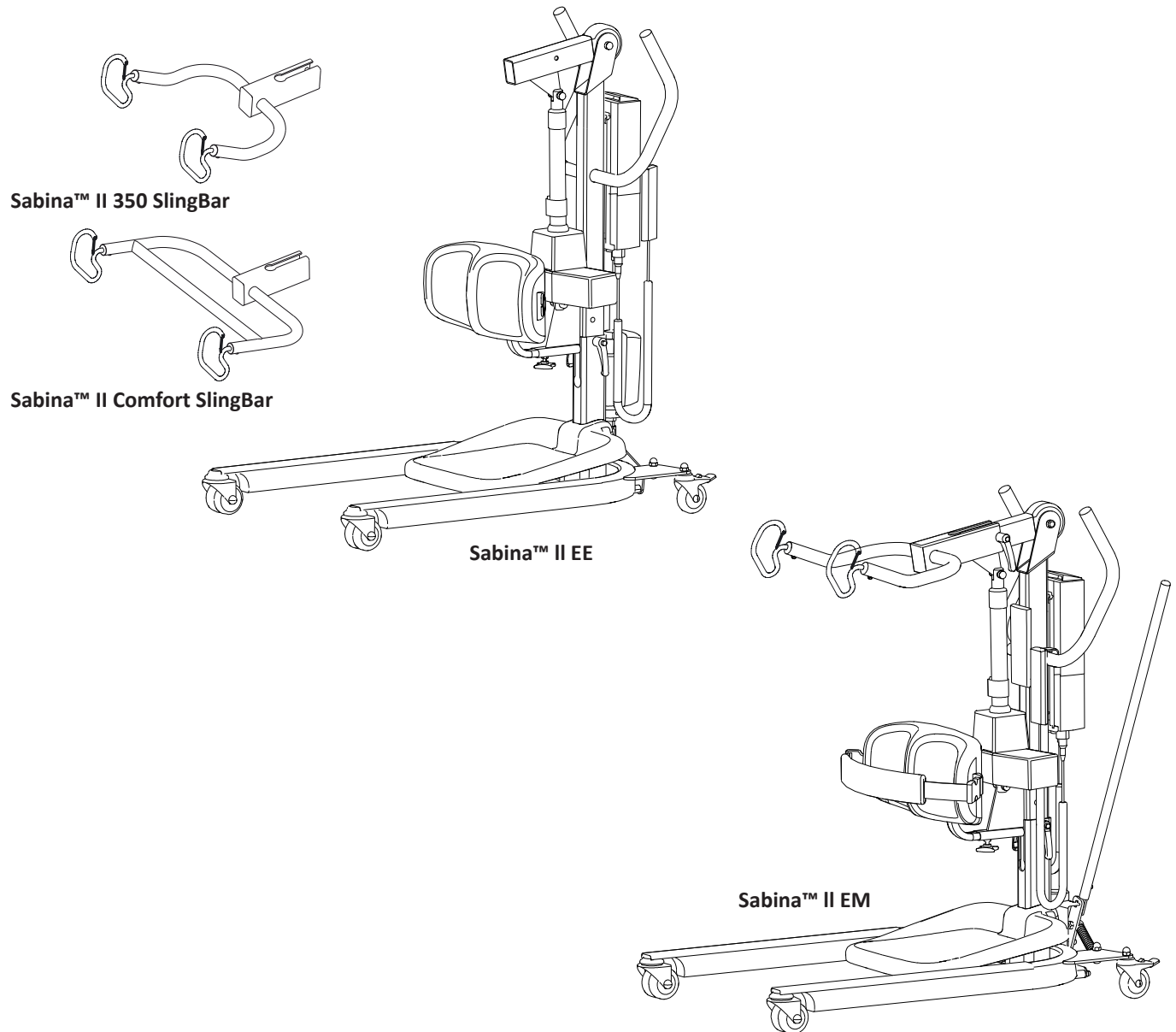
sit to stand lift


Service Manual



Sabina™ II EE Product No. 2020003

Sabina™ II EM Product No. 2020004 (*discontinued 2013*)



 *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 to patient or caregiver.*

Spare part statement

Liko AB will as manufacturer of stationary & mobile lifts keep spare parts available for 10 years after the last manufacturing date of the product.
Spare parts are available in the spare parts list or in the Service Manual for each model of lift.
Components (manufacturing parts) are not available after last manufacturing date.

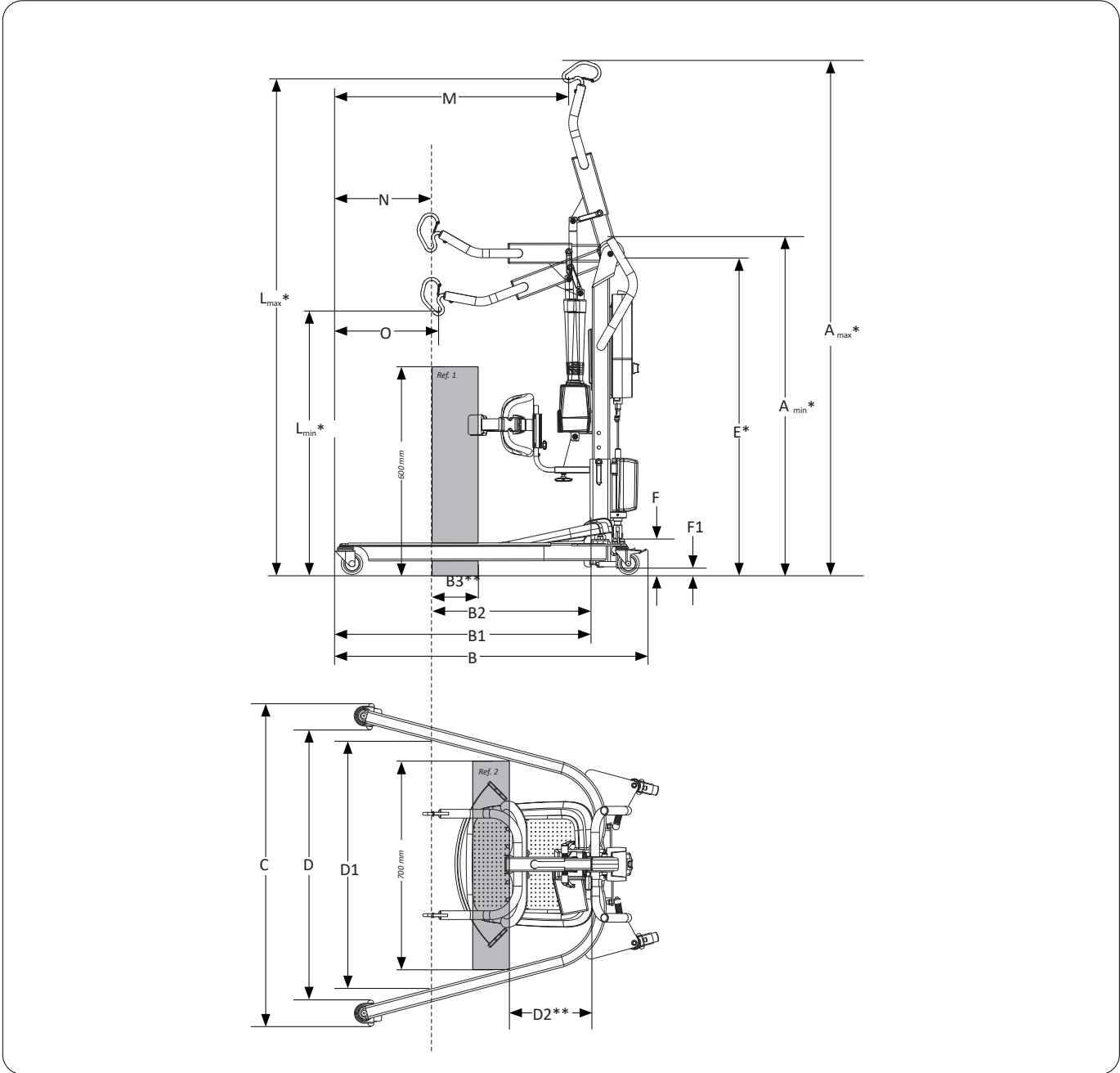
Repairs and maintenance may only be performed by personnel authorized by Hill-Rom and using original Liko™ spare parts.
For information regarding Service and Maintenance education, contact your Hill-Rom representative.
For contact information please visit our websites: **www.hillrom.com**.

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1.0 Technical Data Sabina™ II sit to stand lift



Measurements

(mm.)

Sabina II EE	A _{min} *	A _{max} *	B	B1	B2	B3	C	D	D1	D2**	E*	F	F1	L _{max} *	L _{min} *	M	N	O
SlingBar 350	1050	1770	1060	870	590	190	690-1115	530-1005	915	210	900-1000	107	22	1725	800	790	280	310
Comfort SlingBar	1050	1750	1060	870	555	150	690-1115	530-1005	900	210	900-1000	107	22	1695	810	790	315	340

(inch.)

Sabina II EE	A _{min} *	A _{max} *	B	B1	B2	B3	C	D	D1	D2**	E*	F	F1	L _{max} *	L _{min} *	M	N	O
SlingBar 350	41.3	69.6	41.7	34.2	23.2	7.5	27.2-44.9	20.9-39.5	36.0	8.2	35.4-39.3	4.2	0.9	67.9	31.5	31.1	11.0	12.2
Comfort SlingBar	41.3	68.9	41.7	34.2	21.8	5.9	27.2-44.9	20.9-9.5	35.4	8.2	35.4-39.3	4.2	0.9	66.7	31.8	31.1	12.4	13.4


* Different measurements depending on the height-setting position, please see "Assembly", page 10. Note! The measurements are based on the lift being equipped with standard wheels. When changing wheels, check that the lift still achieves desired lifting height.


** Reference measurement according to Standard EN ISO 10535:2006. The page reference is a page in Instructions for Use Sabina II.

1.0 Technical Data Sabina™ II sit to stand lift

Maximum load:	Active lifting: 200 kg (440 lbs) Passive lifting: 150 kg (330 lbs)
Material:	Powder-painted steel.
Weight:	Total: 41 kg (90 lbs) Heaviest removable part: 23 kg (50 lbs)
Wheels:	Standard front: 75 mm (3 inch) twin wheel. Standard back: 75 mm (3 inch) individual wheel fitted with brake
Foot rest:	Removable.
Lower-leg support:	Adjustable in terms of height and depth. Removable.
Turning diameter:	1180 mm (46.5 inch.)
Emergency lowering device:	Mechanical and electrical.
Lifting interval:	SlingBar 350: 825 mm (32.5 inch.) Comfort SlingBar: 785 mm (30.9 inch.)
Lifting Speed (without load):	SlingBar 350: 54 mm/s (2.13 inch./s) Comfort SlingBar: 47 mm/s (2.1 inch./s)
Maximum noise output:	46 dB(A)
Protection class:	IP X4

Operating forces of controls:	2.4 N
Intermittent operation:	Int. Op 10/90, active operation max 2 min. Only 10% of a given length of time may be active, yet no more than 2 min.
Batteries:	2 x 12 V 2.9 Ah. Valve-regulated lead-acid gel-type batteries. New batteries are provided by the supplier.
Battery charger:	Built-in charger for 100-240 VAC, 50-60 Hz, max 400 mA.
Lift motor:	24 V 9,2 A, permanent magnetic motor with mechanical safety mechanism.
Motor base:	24 V, 5 A, permanent magnetic motor.
Surrounding functional environment:	Temperature: +5°C to +40°C (41° F to 104°F), Humidity: 10% to 95% at 30°C non-condensing, Atmospheric pressure: 700HPa to 1060HPa, Altitude: max. 3000m.

 The device is intended for use indoors.

 Type B, in accordance with the electrical shock
protection class.

 Class II equipment.

2.0 Troubleshooting Sabina™ II sit to stand lift

**The lift does not go up/down.
Base width adjustment does not
work (in/out).**



1. Check that the emergency stop has not been engaged.
2. Make sure that the cables to the control box are connected correctly.
3. Make sure that the charging cable is not connected to a socket.
4. Check the battery voltage.
5. Check that the battery's contact plates are not defective or broken.
6. *If the lift still does not work properly, please contact Hill-Rom.*

The charger doesn't work.



1. Check that the emergency stop has not been engaged.
2. Check that the battery's contact plates are not defective or broken.
3. *If the lift still does not work properly, please contact Hill-Rom.*

The lift is stuck in a high position.



1. Check that the emergency stop has not been engaged.
2. Use the selected electrical emergency lowering device to lower the patient onto a firm surface.
3. Use the selected mechanical emergency lowering device to lower the patient onto a firm surface.
4. Check the battery voltage.
5. *If the problem remains, please contact Hill-Rom.*

If you hear unusual sounds.



Contact Hill-Rom.

3.0 Spare Parts Assembly Information

INFORMATION

Assembly Instructions to Liko™ spare parts are attached with the products. The assembly instructions are also available in Agile and on the Partner Web. Document number to spare parts assembly instructions can be found in the spare parts list.

Document Number

Cable for handcontrol LR 242S, ES

Assembly Instruction

Product No. 31290070

Contains:	Qty:
Hand control cabel	1

Fits:	Prod. No.
Hand Control 242 ES 2 Button	3126034
Hand Control LR 242 ES-IMS	3126035
Hand Control LR 242 ES 4 Button	3126036
Hand Control LR 242 ES 6-Button	3126038
Hand Control Ultra Twist	21090053
Hand Control Ultra Control Unit	21090059

Print this document in colour!

Tools required:

Cable colour

1	Green
2	Pink
3	White
4	Red
5	Blue
6	Yellow
7	Brown
8	Grey

NOTE

- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom and using original Liko™ spare parts.

3EN550203 Rev. 5
ENGLISH

Enhancing outcomes for patients and their caregivers:

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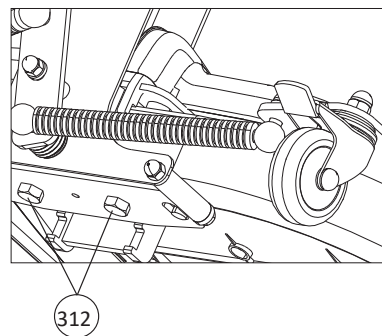
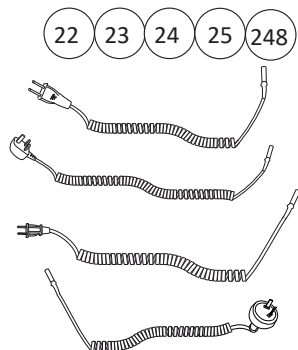
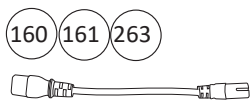
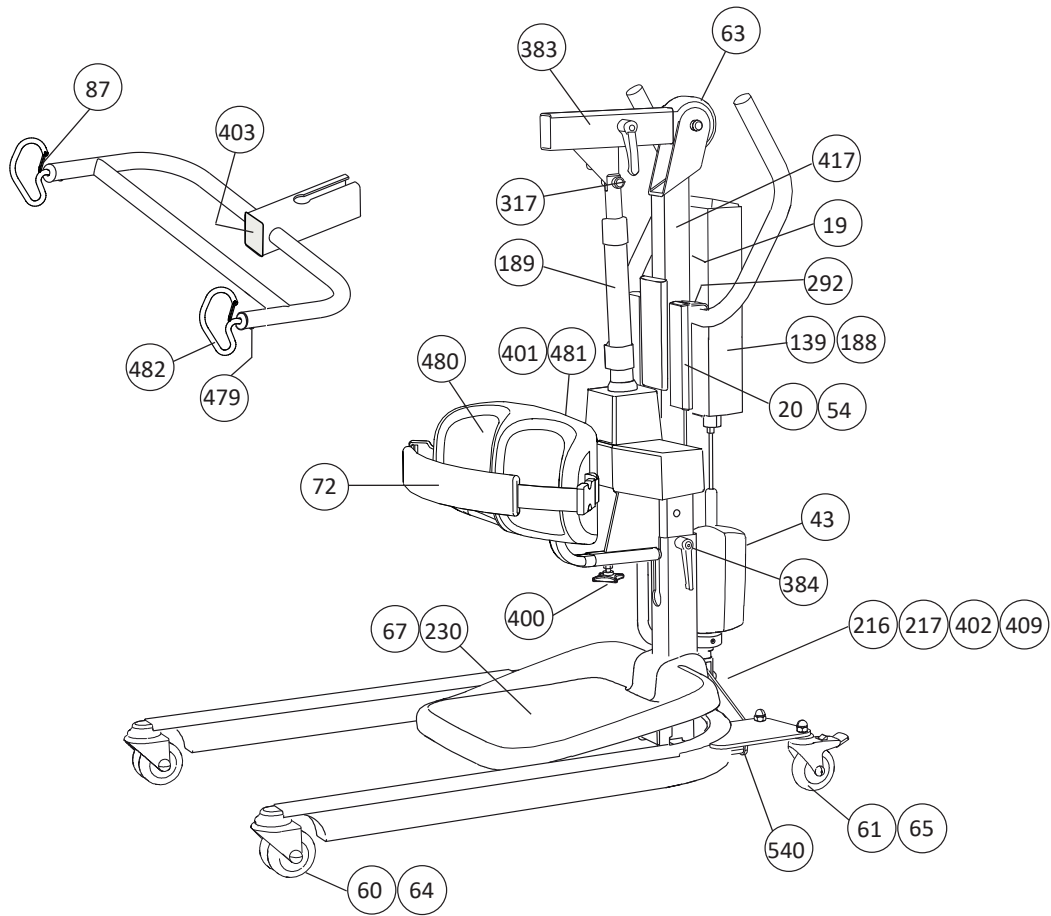
NOTE

- Always make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom and using original Liko™ spare parts.

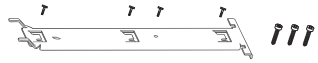
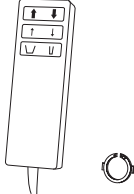
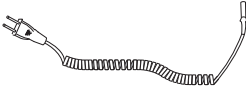

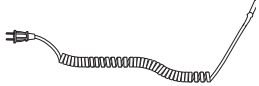
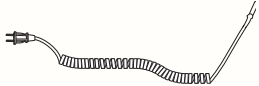
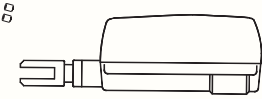
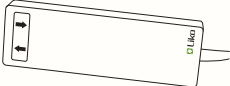
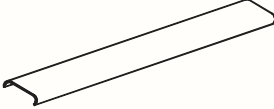

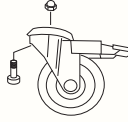
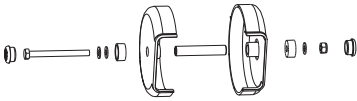
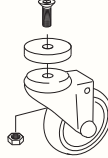
Liko™ technical documentation can be found under “My information” - “Documents” on the Partnerweb: <https://partner.liko.com/> If you don't have access, send an mail to: se.customer.service@hill-rom.com

4.0 Spare Parts List Sabina™ II sit to stand lift

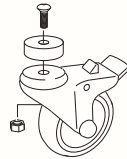
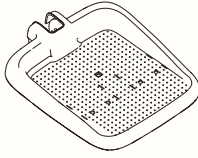
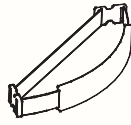
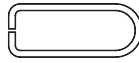
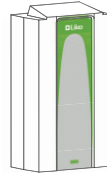

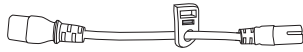
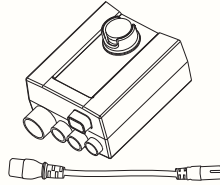
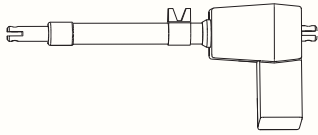
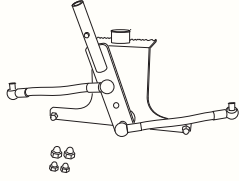
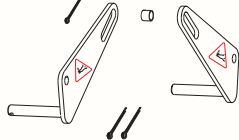
PROD. NO.	PRODUCT
2020003	Sabina II EE
2020004	Sabina II EM, (Discontinued 2013)



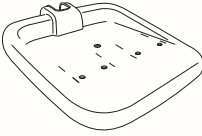


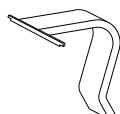
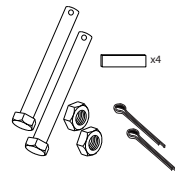
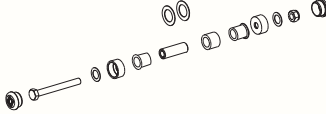
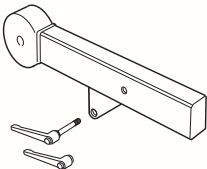



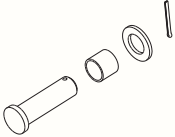

4.0 Spare Parts List Sabina™ II sit to stand lift

PROD. NO.	POS. NO.	NAME	UNIT		ASSEMBLY INSTR.
20090023	19	Attachment for Control Box	pce		3EN630238
20090089	20	Hand control 6-Button <i>fits Sabina EE / Sabina II EE</i>	pce		3SE690232
20090026	22	Cable for charging EU	pce		3EN630237
20090027	23	Cable for charging UK	pce		
20090028	24	Cable for charging US	pce		
20090029	25	Cable for charging JP	pce		3EN690279
20190003	43	Actuator for Base Widening <i>fits Sabina EE / Sabina II EE</i>	pce		3SE640284
20190016	54	Hand control EM 2-Button <i>fits Sabina EE / Sabina II EE</i>	pce		3SE630204
20190029	58	Leg Protector	pair		183073
20190042	60	Front Wheel 75 mm	pce		3SE640283
20190043	61	Rear Wheel 75 mm	pce		3SE640282
20190045	63	Lift Arm Plastic Cover	set		3SE630211
20190046	64	Front Wheel 100 mm	pce		3SE640281

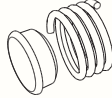
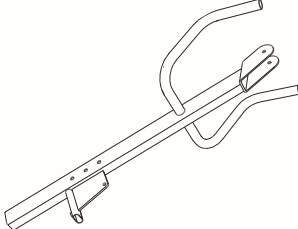
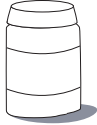
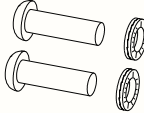
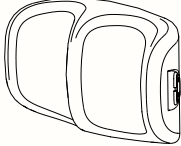
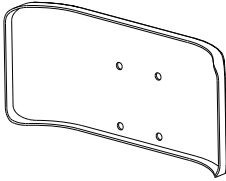
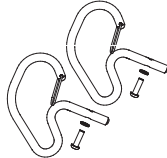

4.0 Spare Parts List Sabina™ II sit to stand lift

PROD. NO.	POS. NO.	NAME	UNIT		ASSEMBLY INSTR.
20190047	65	Rear Wheel 100 mm	pce		3SE640285
20290006	67	Foot Tray complete	pce		3SE630245
20290022	72	Calf Strap <i>(Registered as an accessory from 2011)</i>	pce		-
31190018	87	Latch	pair		3EN640271
2006106	139	Battery Lead Acid	pce		3EN630224
21090001	160	Extension Cable	pce		3EN630225
21090000	161	Extension Cable JP	pce		3EN690280
20290024	188	Control Box Sa II	pce		3SE630223
20290024US	188	Control Box Sa II, US <i>only for the US market</i>	pce		
20290024JP	188	Control Box Sa II, JP <i>only for the Japanese market</i>	pce		
20290023	189	Actuator Sa II	pce		3SE640247
20190049	216	Restoration set Manual Base	set		3SE630226
20190050	217	Restoration set Electrical Base	set		3SE630227

4.0 Spare Parts List Sabina™ II sit to stand lift

PROD. NO.	POS. NO.	NAME	UNIT		ASSEMBLY INSTR.
20290026	230	Foot Tray cover , Sa II	pce		3SE630245
20090050	248	Cable for Charging AU/NZ	pce		3EN630237
21090011	263	Extension Cable US	pce		3EN630218
20090058	292	Hook for Hand control 2,4,6	pce		3SE630210
20190057	312	Screw M12x105 U1,U2,Sa	pce		3SE640245
20290029	317	Pivot point actuator Sa II	set		3SE640246
2027010	383	Sabina Lift Arm incl. Locking Handles	set		3SE630264
2107101	384	Locking handles	pair		3SE650248
20290033	400	Star wheel M8	pce		3SE650265
20290034	401	Locking rail & Star wheel M6	set		3SE650251
20190070	402	Bolt Connection	set		3SE650252
20290035	403	Plastic cover	pce		3SE650253

4.0 Spare Parts List Sabina™ II sit to stand lift

PROD. NO.	POS. NO.	NAME	UNIT		ASSEMBLY INSTR.
20190073	409	Pressure spring	set		3SE650258
20290038	417	Mast Sabina II	pce		3SE650268
20190048	448	Lacquer Top Coat for Improvement, Grey	pce		-
20290042	479	Hook assembly	set		3SE690202
20290043	480	Leg Support II	pce		3SE690205
20290044	481	Leg Support cover, Sabina <i>Sa II to S/N 460799</i>	pce		3SE690203
20290046	482	Sabina Hook Retrofit kit II	set		3SE680204
184010	540	Center Assembly Set <i>Sa II EM from S/N 414443</i>	set		3SE670224

5.0 Periodic Inspection Information Sabina™ II sit to stand lift

INFORMATION

⚠️ Liko™ lifts must be thoroughly inspected at least once per year. Inspection and service must be carried out by Hill-Rom authorized personnel.

For Liko™ sit to stand lifts Periodic Inspection Liko™ sit to stand 3EN371001 is available on the Partner Web (and internally in Agile).

Periodic Inspection
Liko™ mobile lifts
Liko™ sit to stand lifts
3EN371001 Rev. 1

Valid for following lifts: Viking™, Galax™, Liko™, Liko™ L100™, M33000™, Liko™, Liko™, Sabina™

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 Oil
Fill the Oil level System (OS) or the Diagnostic System (DS) are available, also can be used when the Diagnostic Unit Control Unit. The Oil level system and DS show data, with a unit in the table below.

TASK	AS	AS
------	----	----

Control Unit Jumper Case
From the display, write down the value in the table below.

AS	AS
----	----

Expected life

Control Unit Oil	Control Unit Jumper Case
Viking™ M1 mobile lift 200 Ah	Viking™ M1 mobile lift 2 320 000 Ah
Viking™ T1 mobile lift 300 Ah	Viking™ T1 mobile lift 2 730 000 Ah
Viking™ X1 mobile lift 1020 Ah	Viking™ X1 mobile lift 3 672 000 Ah
Galax™ E300 mobile lift 700 Ah	Galax™ E300 mobile lift 2 200 000 Ah

If the control unit has been replaced, the total Ah or As will show values for the control unit, but not for the mobile lift. The mobile lift has an expected service life of 10 years when properly used and maintained.

Inspection sign off
Complete inspection according to Instructions for the check points (page 3-5), 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 that appear "Not approved" (check do not pass), then the lift must not be used.

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.hillrom.com.

Inspection performed by:	Date:
Inspected by:	

Inspection performed in accordance with ISO 9001:2008 Annex B: Internal 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.

Following customers for parts and their company: **Hill-Rom**

Liko™ technical documentation can be found under “My information” - “Documents” on the Partnerweb: <https://partner.liko.com/> If you don't have access, send an mail to: se.customer.service@hill-rom.com

Periodic Inspection may only be performed by personnel authorized by Hill-Rom and using original Liko™ spare parts.

Available Liko™ Periodic Inspections:

- 3EN371001 Periodic Inspection Liko™ Mobile lifts
- 3EN111001 Periodic Inspection Liko™ OH Rail system
- 3EN191001 Periodic Inspection Overhead Lifts
- 3EN301001 PI Freespan Freestand
- 3EN601001 Periodic Inspection Liko™ accessories

Also available is Periodic Inspection Slings. This inspection should be performed by a person who is suitable, has good experience and sufficient knowledge about design, use and maintenance of the sling.

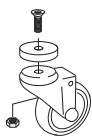
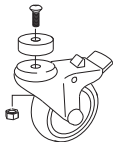
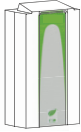

- 7EN160834 General Periodic Inspection Protocol Liko™ Slings and Sabina SupportVests

6.0 Preventive Maintenance Sabina™ II sit to stand lift

Expected Life Time

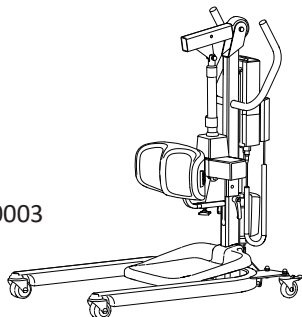
The expected life time of a Sabina™ II sit to stand lift is 10 years of normal use provided that required Periodic Inspection and Preventive Maintenance is performed by personnel authorized by Hill-Rom and using original Liko™ spare parts. However certain parts have a shorter life cycle and will need to be replaced in order for the mobile lift to meet its expected life time. They are listed below:

Parts that needs to be replaced:

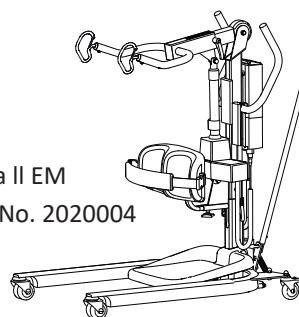
Part		Part No.	Replacement interval:	Replacement:
Front wheel		20190042 or 20190046	5 years	Can be used more than 5 years if no malfunction is detected.
Rear wheel		20190043 or 20490015	5 years	Can be used more than 5 years if no malfunction is detected.
Battery Lead Acid		2006106	3 years	Can be used more than 3 years if no malfunction is detected.
Hand Control		20090089	2 years	Can be used more than 2 years if no malfunction is detected.

Expected Life Time	Product No.	Year
Sabina™ II EE sit to stand lift	2020003	10
Sabina™ II EM sit to stand lift	2020004	10

Sabina II EE
Prod. No. 2020003



Sabina II EM
Prod. No. 2020004



2018

Changes	S/N	Project
New version of Sabina II EE - excluding calf strap, leg protector, and holder for Quick Reference Guide. Product revision changed to rev 2.	-	SUS002702

2013

Changes	S/N	Project
2020004 Sabina II EM is obsoleted. New spare part created, 184010 Center assembly set Spare part that only fits to Sabina-models 2020001 Sabina EE and 2020002 Sabina EM (obsoleted 2003), will go obsolete during 2014: Product No. 20290008 Actuator JKAS 250 G Sa 20290011 Control box Sa 20290011US Control Box Sabina, US 20290037 Mast Sabina	-	1931

2012

Changes	S/N	Project
New Hook II on the sling bars.	461676	1732

2011

Changes	S/N	Project
New Knee support.	460900	1627
New Hook on the sling bars.	460600	1672

2010

Changes	S/N	Project
Document update according to ISO10535: 2006	-	1059

2008

Changes	S/N	Project
New version of casings, mob 30 New pivot point arm-mast, mob 54 Holder for quick reference guide with colour codes for sling sizes, introduced New version of foot frame Two new screws at the mast - SK6SS M8x10 Emergency guard introduced	452000	749

2006

Changes	S/N	Project
Battery box with display	423853	550
Battery box without display	423704	550
New pivot points arm - actuator	421809	426

2005

Changes	S/N	Project
New locking handles	419031	-

2003

Changes	S/N	Project
New version of screw M6S M12x105	414443	-
Sabina II EM replaces Sabina EM	413621	-
Waxed inner packaging introduced, bubble plastic and foam discontinued	413373	-
New version of centre Locking nut M12 instead of welded castellated nut, EM	406485	-
New version of centre Locking nut M12 instead of welded castellated nut ,Sabina II	413260	-
Foot tray tested on every lift	412854	-
New serial number decal EM	406453	-
New serial number decal EE	412630	-

2002

Changes	S/N	Project
New colour coating on handcontrols	411496	-
Plastic spacer/washer 12.5/20x0.42 added to sleeve on emergency-lowering device EM	410702	-
S6SS M6x10 discontinued, mounted in the centre	410702	-
New screw on mast attach. MRT-GF M5x16	410702	-

2001

Changes	S/N	Project
Last Sabina in old style	406250	-
First Sabina II	410001	-



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