World Leader in Lift Productivity

SM40

Scissor Lifts

TÜV
Rheinland

OPERATION & MAINTENANCE MANUAL

SM40LT-47/51

User Manual

Chapter headings **page**

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

EG-Konformitätserklärung
EC Declaration of Conformity

im Sinne der EG-Richtlinie 2006/42/EG über Maschinen (Anhang II A)
according to EC directive 2006/42/EC on machinery (Annex II A)

Name und Anschrift des Herstellers /
Name and address of the manufacturer:

BlitzRotary GmbH
Hüfinger Str.55
78199 Bräunlingen, Germany

Diese Erklärung bezieht sich nur auf die Maschine in dem Zustand, in dem sie in Verkehr gebracht wurde; vom Endnutzer nachträglich angebrachte Teile und/oder nachträglich vorgenommene Eingriffe bleiben unberücksichtigt. Die Erklärung verliert ihre Gültigkeit, wenn das Produkt ohne Zustimmung umgebaut oder verändert wird.
This declaration relates exclusively to the machinery in the state in which it was placed on the market, and excludes components which are added and/or operations carried out subsequently by the final user. The declaration is no more valid, if the product is modified without agreement.

Hiermit erklären wir, dass die nachstehend beschriebene Maschine
***Herewith we declare**, that the machinery described below*

Produktbezeichnung / *product denomination*:	**4-Säulen-Hebebühne / 4-post vehicle lift**
Serien- / Typenbezeichnung / *model / type*:	**SM40-47; SM40-51; SM40AT47; SM40AT-51** Tragfähigkeit 4000 kg / capacity 4000 kg **SM40LT-47; SM40LT-51** **SM40LTAT-47; SM40LTAT-51** Tragfähigkeit 4000/3000 kg// capacity 4000/3000 kg

Maschinen-/Seriennummer / machinery / serial number: ……..

Baujahr / *Year of manufacture:* **20**…

allen einschlägigen Bestimmungen der Maschinenrichtlinie 2006/42/EG entspricht.
Die Maschine entspricht zusätzlich den Bestimmungen der Richtlinien 2004/108/EG über elektromagnetische Verträglichkeit und 2006/95/EG über elektrische Betriebsmittel *(Schutzziele wurden gemäß Anhang I, Nr. 1.5.1 der Maschinenrichtlinie 2006/42/EG eingehalten).*
is complying with all essential requirements of the Machinery Directive2006/42/EC.
In addition the partly completed machinery is in conformity with the EC Directives 2004/108/EC relating to electromagnetic compatibility and 2006/95/EC relating to electrical equipment (*Protection objectives have been met in accordance with Annex I No. 1.5.1 of the Machinery Directive 2006/42/EC).*

Angewandte harmonisierte Normen / *Harmonised Standards used*

EN 1493:1998+A1:2008	Fahrzeug-Hebebühnen / Vehicle lifts
EN ISO 12100-1 : 2003	Sicherheit von Maschinen - Grundbegriffe / *Safety of Machinery- Basic concepts*
EN ISO 12100-2 : 2003	Sicherheit von Maschinen - Grundbegriffe / *Safety of Machinery- Basic concepts*
EN 60204-1:2006+7/2007	Elektrische Ausrüstung von Maschinen / *Electrical equipment of machines*
EN 349:1993+A1:2008	Sicherheit von Maschinen-Mindestabstände / *Safety of machinery - Minimum gaps*
EN ISO 13850:2008	Sicherheit von Maschinen-Not-Halt / *Safety of machinery – Emergency stop*
EN ISO 14121-1:2007	Sicherheit von Maschinen-Risikobeurteilung / *Safety of machinery - Risk assessment*

Angewandte sonstige technische Normen und Spezifikationen
Other technical standards and specifications used:

BGG 945	Prüfung von Hebebühnen / inspection of vehicle lifts
BGR 500	Betreiben von Arbeitsmitteln / management of working appliances
BGV A3	Unfallverhütungsvorschrift elektrische Anlagen und Betriebsmittel / law accident prevention regulation of electric facilities and equipment

Bevollmächtigter für die Zusammenstellung der relevanten technischen Unterlagen:
The person authorised to compile the relevant technical documentation:
Herr Pohl; Hüfinger Str. 55; 78199 Bräunlingen

Ort / *Place :* Bräunlingen
Datum / *Date :* 21.12.2009

Carsten Rohde
Geschäftsführer / Managing Director

2 – TECHNISCHE EIGENSCHAFTEN

capacity..... lift..... .... 4000 kg

capacity..... auxiliary lift..... .. ..3000 kg

lifting time / lowering time.....lift..... .....appr..... 45 Sek.

lifting time / lowering time..... auxiliary lift..... .....appr..... .....10 Sek.

power e-motor..... ....3 kW

Whole power..... ....3,1 kW

Electricity supply…… ....230 V/400 V - Tri + PE + N - 50/60 Hz

Pneumatic supply……..... .... 6/8 Bar

Capacity of the oil tank..... .... 11 l.

Pressure hydraulic cycle..... ....190 Bar

Net weight lift……..... .... 1955 kg

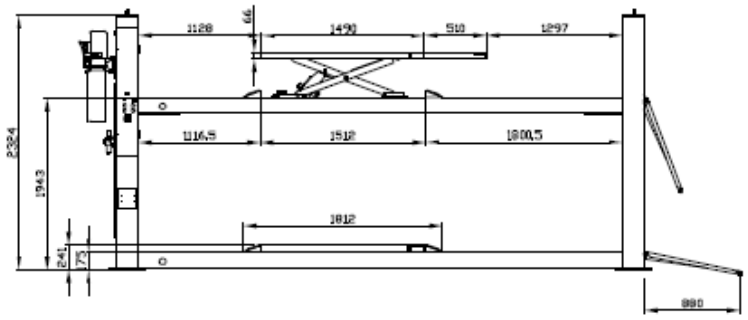
Maximum volume level for the equipment leader in the job..... .... 70 dB(A)

Ambient temperature area ……..... ....0 bis + 50°C

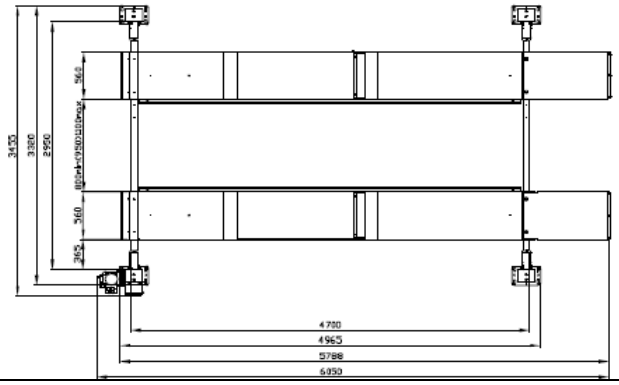
Area of the relative humidity (without condensation)……..... .....30 bis 95%

Measures SM40-LT-47

SIDE FACE

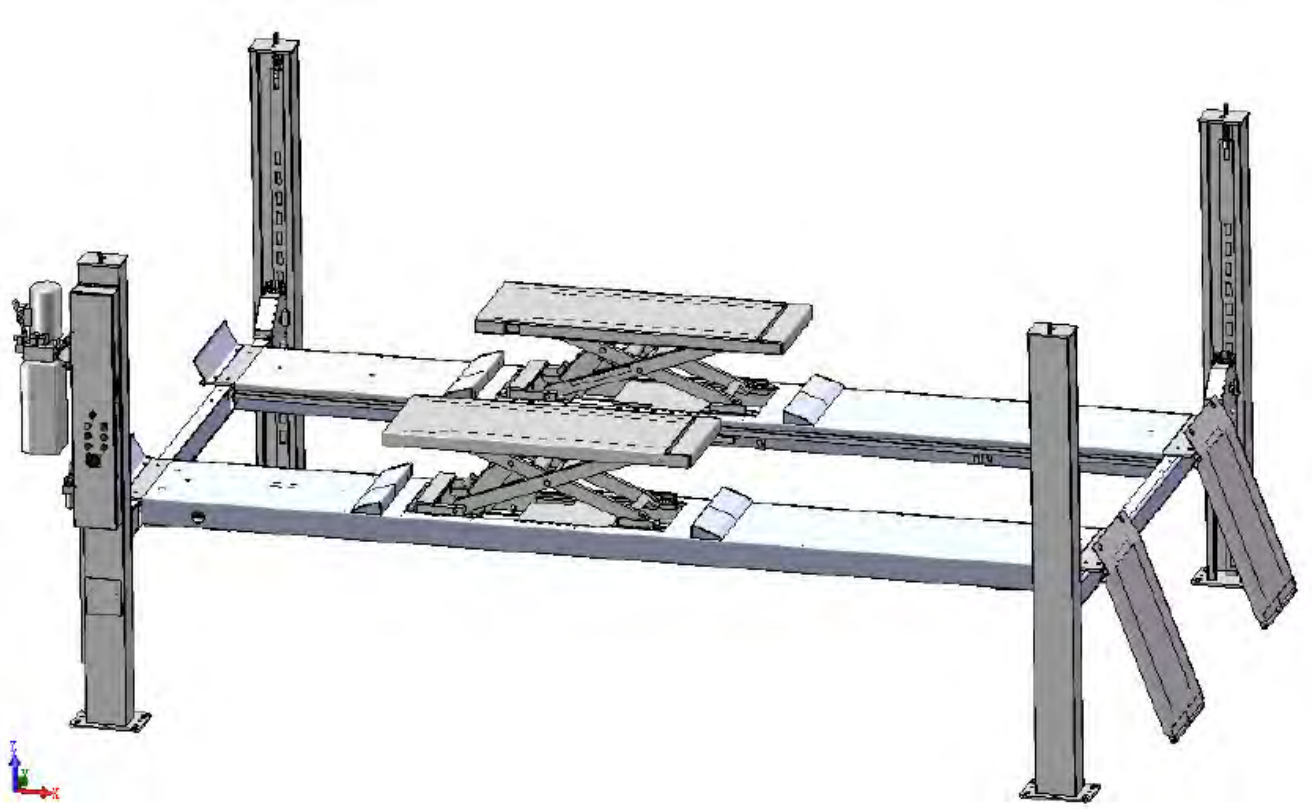


PLAN VIEW



Dimensions in mm

3 - NAME



part	sescription	part	description
1	Auxiliary lift	11	Hydraulic power unit
2	Plattform	12	Compressed air maintenance unit
3	Fixed runway	13	
4	Movable runway	14	
5	Wheel Stopp ()	15	
6	ramp	16	
7	Column with control unit	17	
8	column	18	
9	Grounplate of column	19	
10	crossbeam		

4 – AUSWEISUNG DER HEBEBÜHNE

If you have the model of lift, the standard number and possible additional parts ready, becomes to you the customer service of the supplier can still give better assistance. You find the following information on the model badge:

MODEL *SM40/LT-47/51* PRODUCTION YEAR 2 0 0 SERIENNR:	Load capacity (kg) : 4000 (Hebebühne) 3000 (Radfreiheber) Electric supply (V) : 230/400 Power(kW) : 3.1 Power e-motor (kW) : 3 Number of the phases: 3 + N + PE Frequency (Hz) : 50/60 Pneumatics pressure (Bar): 6/8

5 –RANGE OF APPLICATION

This user's handbook is a component of the make.

Peruse the warning tips and instructions in this manual carefully, because this important information about the **sure service of the machines** and **their servicing contains.**

IF **THEY PRESERVE THIS MANUAL PROPERTY ON TO BE ABLE TO LOOK UP IN CASE OF NEED.**

The vehicle lift SM40LT-47 / 51 is a hoist stuff for private cars and light truck with a maximum weight of 4000 kg.

Their principal purpose consists in helping by the servicing and repair of motor vehicles.

CARE

These vehicle lift is only for the inside use. It may not be used outside.

Concentrate the load not in the middle of the vehicle lift.

The load distribution must correspond to the following demands:

Main vehicle lift:

- Minimum bicycle situation of 3000 mm at least
- Distance of the front or rear base of 300 mm at least from the ends of the rolling trajectory (see fig. 1 on the page 6).

Auxiliary lift:

- maximum bicycle situation of 1700 mm at most
- Distance between the bases (in direction of the traffic) from 1200 mm at least (see illustration 2, page 6).

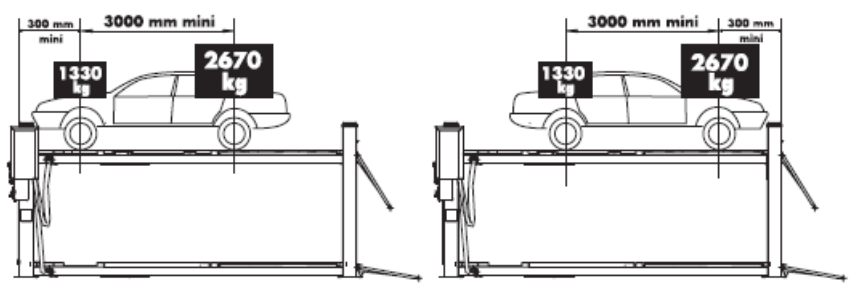


Abb. 1

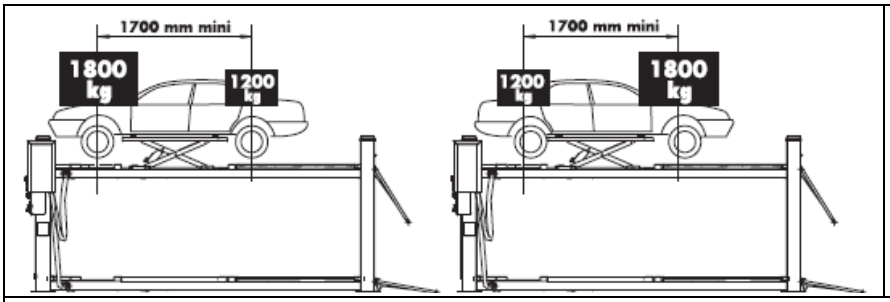
The burden-sharing on every vehicle lift must correspond to the topical standards:

Front / rear distribution:

-main lift:

must amount to 2/3 on the front and 1/3 at the rear, and vice versa.

- auxiliary lift:

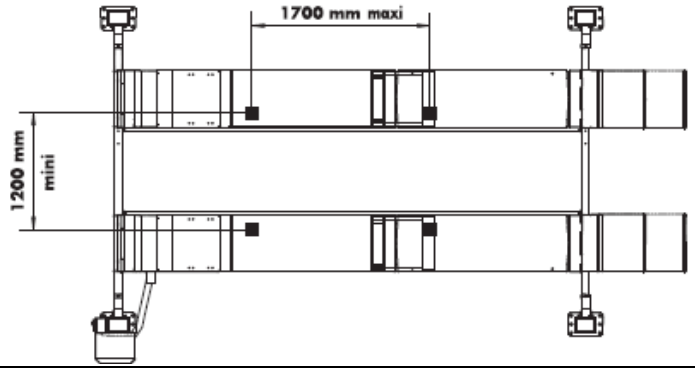


must amount to 3/5 on the front and 2/5 at the rear, and vice versa.

left to the right of distribution:

may not exceed 10%.

Abb. 2



CARE

Provide for the fact that with the decreasing of auto parts the balance is not affected, in particular if you use the bicycle free siphons for beginning.

CARE

It is forbidden to use the vehicle lift in explosive surroundings.

CARE

It is forbidden to lift the load only on a pavement (vehicle lift) or a platform (auxiliary lift), all the same as small the weight is, because this can lead, otherwise, to dangerous instability between vehicle lift and vehicle.

CARE

Use the lift not for washing vehicles.

CARE

It is forbidden to use these vehicle lift for others than in this manual described purposes. Above all it is forbidden to lift people. BLITZROTARY Ltd is not responsible for possible damages which originate on the basis of improper wrong or unreasonable use.

6 - GENERAL SAFETY TIPS

The vehicle lift may be served only by certified and authorized specialist staff.

Changes or modifications in the vehicle lift which were not approved before by BlitzRotary GmbH release aforesaid party from any compensation duty, either directly or indirectly.

The removing or altering of safety devices is an offence against the European safety regulations. BlitzRotary GmbH assumes no liability for damages which appear on account of the manipulation of these devices.

- We recommend you to make yourselves close with the help of the instructions for use with the localisation of possible anomalies.
- The use of the vehicle lift is permissible only at places at which no danger of explosion or fire risk consists.
- By accessories or optional additional parts which are used with the vehicle lift it must concern exclusively approved individual parts.
- Ramps and absorption surface must freely be from obstacles.
- Children and animals may not stay near the vehicle lift.
- Vehicles may be raised only in the positions which were planned by the manufacturer for it.
- As a user you must pay attention to the fact that the way, as you raise the load, shows no dangers. Check after short beginning whether the vehicle is positioned correctly and efficiently on the vehicle lift.

Observe the runways and bicycle free siphons all the time, while the vehicle lift is in movement.

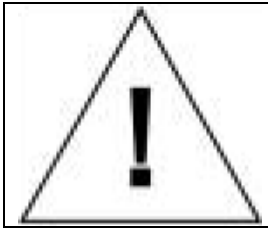
It is forbidden to park, in the area of the ramps, on the driving rails or the stroke tables, while the vehicle lift is in movement.

Nobody may climb the ramp, the driving rails or the stroke tables if these are in raised position.

During the lifting nobody may be in the vehicle or on the vehicle lift.

Examine after every manoeuvre and before you work under the siphon that the vehicle lift is protected mechanically.

Hold the vehicle lift and their surroundings in absolutely clean state.

	Check before use of the vehicle lift that the warning signal functions properly.	

 **CARE**

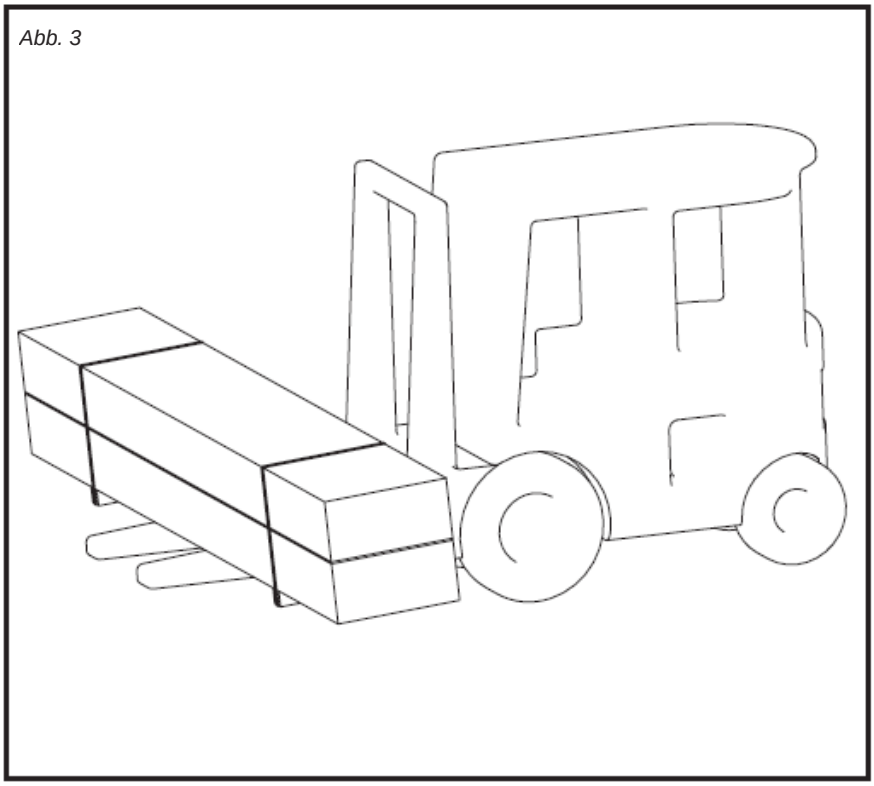
Every kind of work, which, all the same how insignificantly, in the electrical system of the vehicle lift is carried out requires the availability of a certified expert (see the also specific directives relevant for it).

7 - TRANSPORT

The transport of the device must be carried out according to the following instructions:

- Protect the hydraulic device and the switch box against weather influence and avoid their danger by sudden temperature variations.
- On account of her size and her weight the vehicle lift with a suitable forklift or pallette lift must be carried and the forks must be placed under the prescribed points (fig. 3)

Abb. 3



8 - UNPACK

Unpack the device, while the supplier is still present.

Check after the disposal of the packaging the state of the different individual parts of the vehicle lift to make sure that of no visible damages shows (surface of the vehicle lift, switch box, Enclosing...).

Take down and describe any kind of damages on the delivery note of the supplier. Take the vehicle lift not in use. Contact immediately your authorized trader.

The different packaging materials (plastic bag and plastic foils, polistyrene, cartons, nails, screws, wooden parts, etc.) must be kept for children inaccessible to avoid possible danger situations.

Decontaminate pollutants and not diminishable substances environmentally sound.

9 - INSTALLATION PLACE

CARE

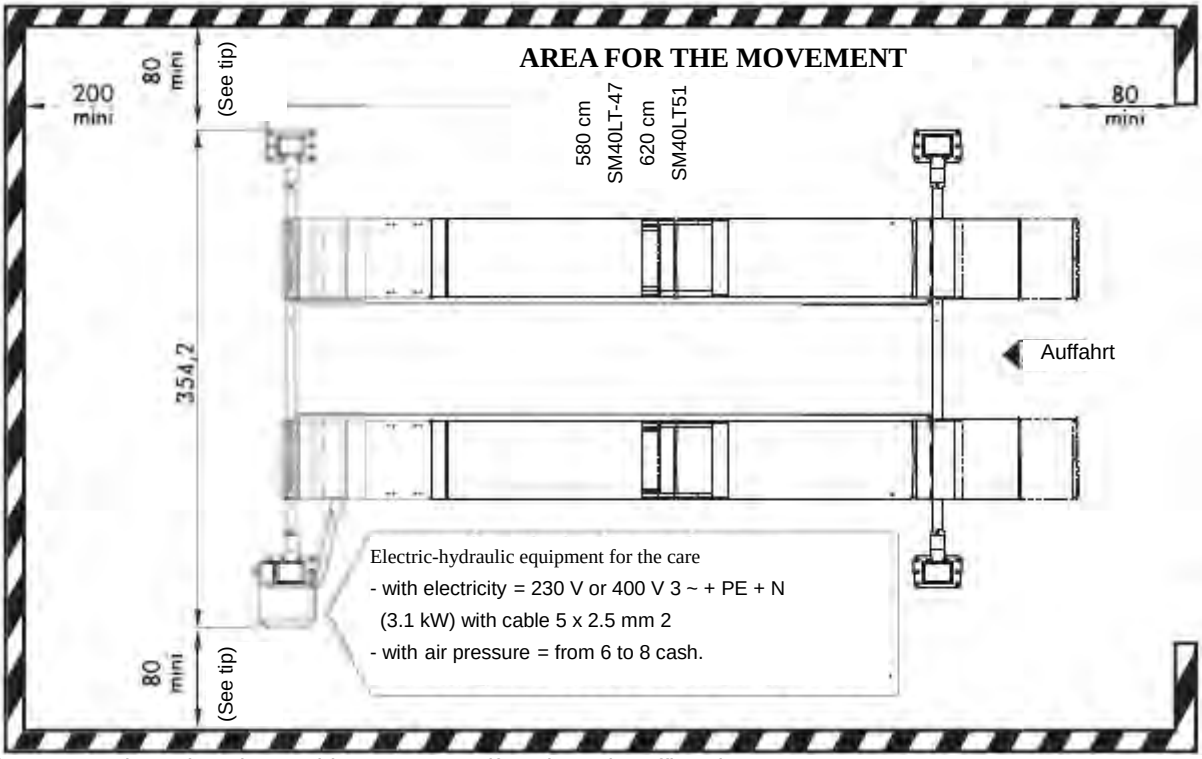
Follow with a choice of the installation place for the vehicle lift topical directives with regard to safety in the job.

CARE

Point out the authorized customer service of the supplier to all in ground pipe or cable (electricity, air pressure, waters...) which could become broken with the drilling of the holes for the sure fixing of the vehicle lift.

The equipment leader must be able to have from the switch box the vehicle lift and their surroundings completely in the field of vision, while the vehicle lift is used.
The equipment leader must be able to show in the surroundings the presence of not commissioned employees, from animals or objects which forbid possible dangers.
The absorption surface of the vehicle lift is from ferro-concrete and must support the load during the operation. The concrete quality must amount to C20 / 25. Every column of the vehicle lift carries, on the surface (34 x 23 cm) a maximum load of 2 t.
The table must be about the total surface away just and just (± 0.5 cm). He can be covered with admitted tiles. The thickness of the absorption surface must support the safety points of the columns and have a good state of at least 16 cm.
If the installation of the vehicle lift does not occur on the floor, a stable construction must be carried out or first an architect to rate be moved.
The area for the load and movement must amount to at least 857.5 cm x 486.4 cm (fig. 4).

Illustration 4 – installation plan (dimensions in cm)



*: the distance can be reduced on a side up to 60 cm if no through traffic exists

10 - INSTALLATION

CARE

The installation has to go from a certified expert and according to the following instructions carried outwerden.

Driving rails and cross beams

Positioning of the driving rails

- Position both driving rails approx. 90 cm of each other on wooden documents by chance 10 cm. The standard ground plan is shown in the chapter "INSTALLATION PLACE".
- Place part "A", fastens on the attached driving rail, at the side in which the stroke column will be installed.
- Take the rolled up connecting leads and synchronisation tackles under both driving rails out.
- Lubricate the keyways of the rope rolls which are at the ends of the attached driving rails.
  A container with grease is included in the enclosing.

Positioning of the cross beams

Bring the cross beams to the ends of both driving rails and pay attention to the fact that the parts correspond to the marks A, B and C. These part numbers are marked on the cross beams and on the driving rails (illustration 5).

Protection device of the flexible conduit attach

Fasten the metal protection about the flexible conduit on the attached driving rail; use for it 3 cross screwing (illustration 5).

The newer version is without the metal protection; only with a big screw to connect with the runway.

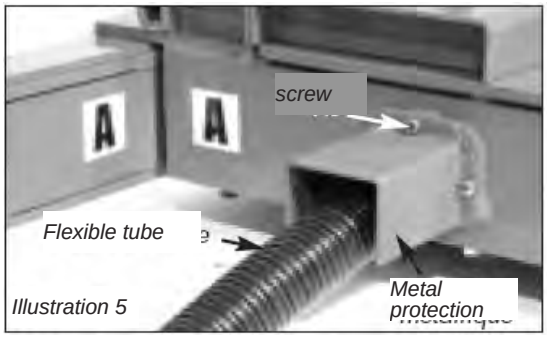


Illustration 5

The rope rolls dismantle

Remove both M8 X 25 screwing from the plastic case which is in each case at the end of both cross beams (illustration 6).

Remove the axis from the cross beam-rope roll at the respective end of both cross beams.

Remove the rings in the axis of the cross beam-rope roll (illustration 7).

Remove the rope roll from every cross beam.

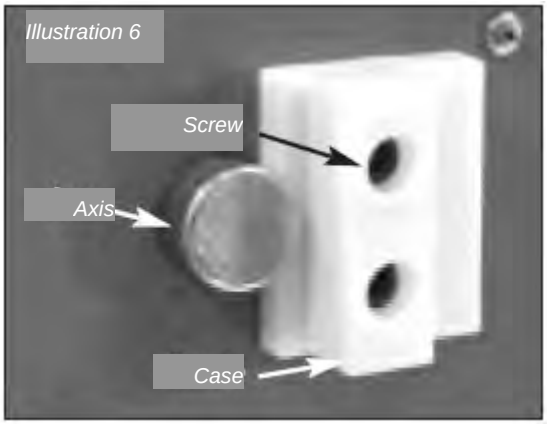


Illustration 6

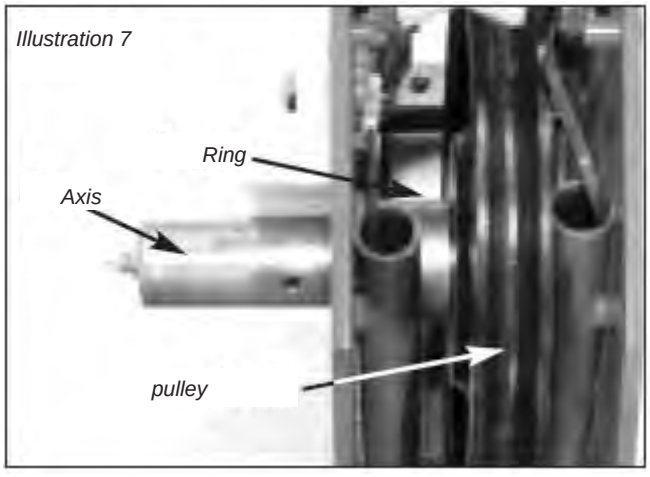


Illustration 7

Connection with the mains supply

Remove the electric connections from the cross beams.

Electric control module for the absorption tackles:

Connect the electric connections with the marks E6 and E7 (illustrations 8 and 9).

Lighting:

Connect the electric connections with the mark E8 (illustration 8).

Provide for the fact that the electric cables run by the channels, trailing and protective lines.

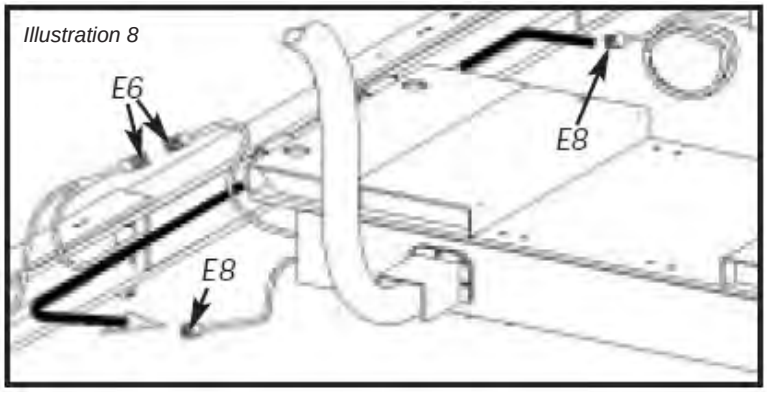


Illustration 8

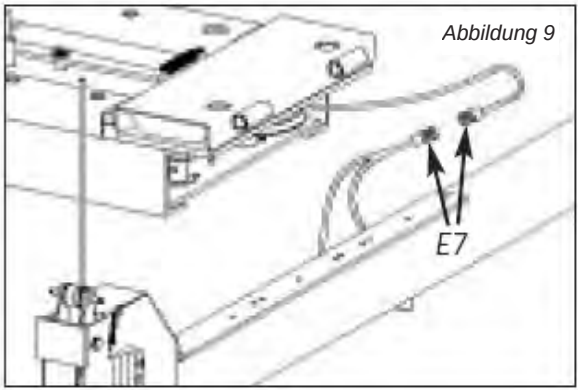


Abbildung 9

Equipment of the absorption tackles

The attached driving rail is equipped with 2 metal tackles whose thread ends lie open on both sides of this driving rail.

Come to the thread end of the rope on the left from the rope roll at both ends of the attached driving rail and lead it by the cross beam to the right.

Come to the thread end of the rope on the right from the rope roll at both ends of the attached driving rail and lead it by the cross beam to the left.

Check that to itself the tackles cross and that they were not laid in the right direction (illustration 10).

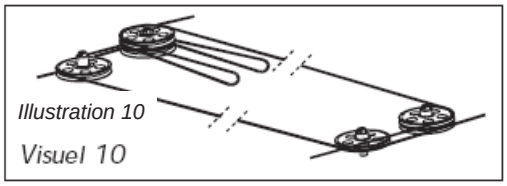


Illustration 10
Visuel 10

Check that the tackle steps in the same length from both sides of the cross beam.

Pull the thread end of the tackle from both sides of both cross beams.

Connect every tackle with the underside of the cross beam (illustration 11).


Illustration 11

Fasten and lubricate every axis of the cross beam-rope rolls and every ring (illustration 7).

Screw on the plastic cover (illustration 6).

Hydraulic line of the connection of the axiliary lift set up

The end of the hydraulic line is in the face of the attached driving rail. Lead out the line by the front cross beam, afterwards from the front cross beam and in the channel of the mobile driving rail.

Connect this hydraulic line with the connection (ø 100 mm) of the bicycle free siphon.

Equipment of the pneumatics line

Connect the end of the pneumatics lines marked with A1 on the sides of the rope rolls of the attached driving rail with the t links in both cross beams (Abbidlung 12).

Lead the pneumatics line marked with A2 on the sides of the rope rolls of the attached driving rail by the inside of the cross beam, then by the channel of the adjustable driving rail and connect them then with the T-piece in the middle of the mobile driving rail (illustration 12).

•

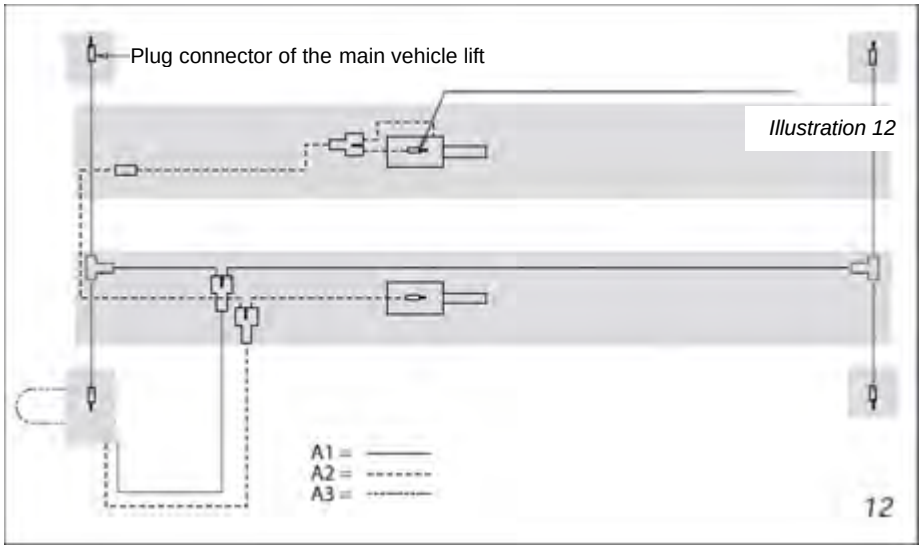


Illustration 12

Assembly of the driving rails and cross beams

Bring the cross beams forwards, under the driving rails, and pay attention to the fact that the tackles do not fall from the grooves of the rope rolls.

Straighten the mounting holes of the cross beams with the holes of both driving rails.

Compare both diagonals of the platform, beginning from the rear end of the cross beam; both must be identical (± 5 mm)

Screw the driving rails with distances of 87 cm to each other in the cross beams; use 8 screws M10 (illustration 13).

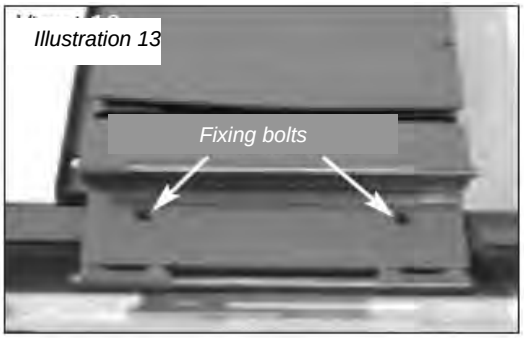


Illustration 13

Equipment of the latch bar

Lower the leading role of the latch fuse cam to simplify the admittance of the latch bar.

Push each of four arrester rods between the Pare-Chute-cam and the end of every single cross beam (illustration 14).

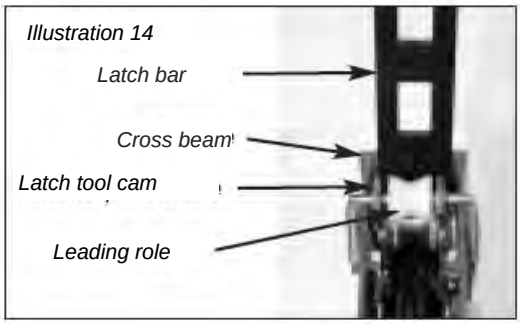
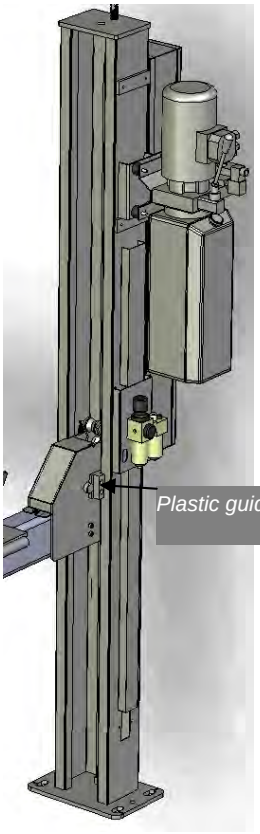


Illustration 14

illustration15



COLUMNS

Installation

Take the point from the stroke column.

Bring the stroke column with the help of a suitable stroke device (crane, elevating platform truck...) in position.

Use a plumb line to compensate the stroke column.

Use, if inevitably, under the base plate of the column balance metal sheets.

Reduce the distance between the stroke column and the plastic guide on 1 mm (illustration 15).

Mark holes on the bottom where the stroke column should be fastened.

Fasten the stroke column with the help of the description of the following chapter with the heading "bottom attachment"

Go forward with the other stroke columns equally, and straighten everybody with the help of a rope or laser on each other.

Bottom attachment

For the bottom attachment of the pillars you need:

Impact drill to drill concrete, and a drill with 16 mm of diameter.

Torque wrench with starting torque of 100 nm.

Go forward as follows:

Drill with 16 mm of drill up to a deepness of 130 mm, clean then the hole.

Push the dowels (16 dowels are included 16x120mm in the scope of supply of the vehicle lift) with light support of a hammer in the holes.

Pull the screw M16 with the torque wrench, opposed on 100 Nm. If this value cannot be reached, then it is due, that:

- the hole is too big
- the strength or state of the concrete not enough is.

Attachment of the arrester rods, absorption tackles and the flexible conduit

Put the threaded bolt, together with 3 provided M16 thread nuts in the hole in the column.

Block the M16 thread nut who is in touch with the arrester rod.

Screw on the upper nuts, but not solidly (illustration 16).

- Lead the thread end of every absorption tackle in the upper records of all 4 columns.
- Screw on the M16 nut and safety nut on all tackles, but not solidly (illustration 17).

Screw the flexible conduit onto the attachment point on the switch box (illustration 18).

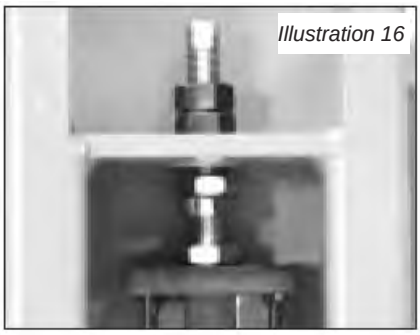


Illustration 16

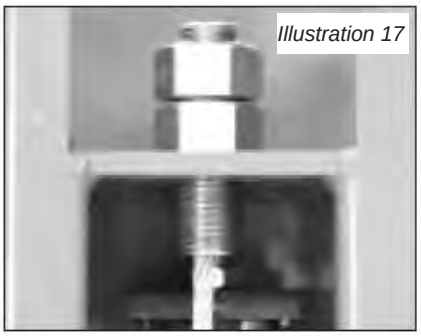


Illustration 17

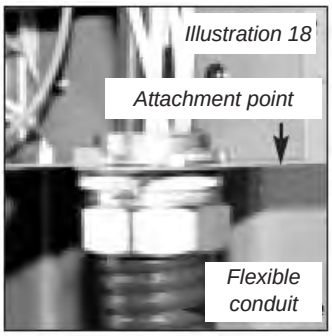


Illustration 18

Installation of the air pressure unit

Position the air pressure unit at the side of the stroke column.

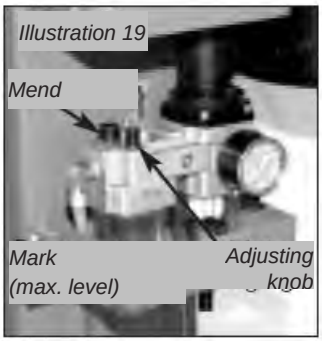
Go forward for it as follows:

Fasten the air pressure unit with both cross screwings which were already detached earlier.

Connect the flexible pneumatics line, from the hydraulic device coming, with the angle connection on the top side of the air pressure unit.

Loosen the stopper of the oilcan and fill this up to the mark on the bowl with vaseline oil. (Illustration 19)

A pot with vaseline oil is included in the enclosing.



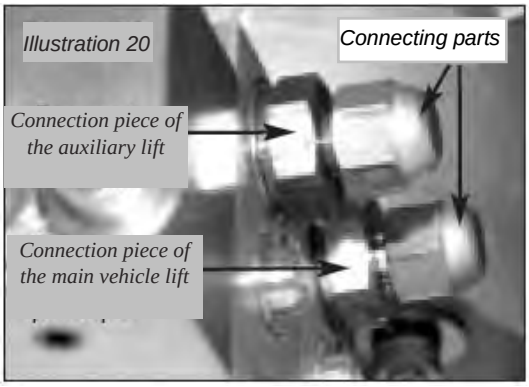
Hydraulic power unit

Hydraulic connection to the driving rails

Remove both stoppers which are screwed on in the hydraulic connection (illustration 20).

Connect the chromium-plated connecting piece on the hydraulic line of the main vehicle lift (part H1) with the chromium-plated connection piece on the hydraulic connection (illustration 20).

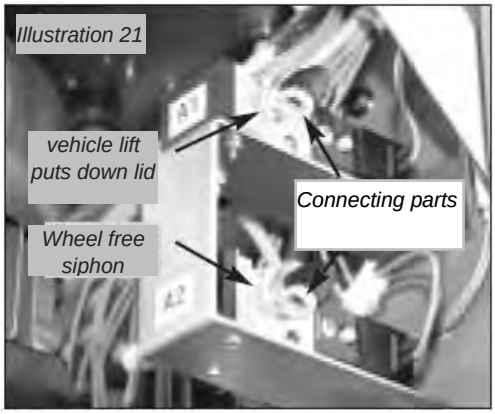
Connect and screw the black nozzle of the hydraulic line of the main vehicle lift (part H2) to the black nozzle of the hydraulic connection (illustration 20).



Pneumatics connections to the ramp

If Connect the pneumatics pipe A1 which comes of the handle piston of the main vehicle lift with the connecting part on the magnetic valve with the name A1 (illustration 21).

Connect the pneumatics pipe A2 which comes of the handle piston of the bicycle free siphon with the connecting part on the magnetic valve with the inscription A2 (illustration 21).



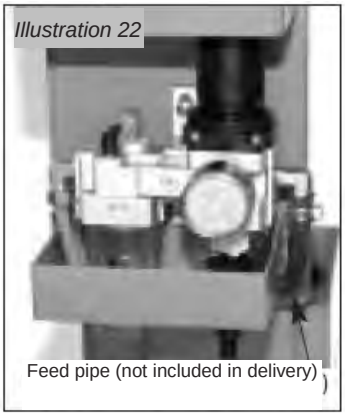
Connection with the mains supply (tax circles)

CARE

All works which are carried out in the electrical system of this machine must be carried out, all the same as unimportant they may also be, from a certified expert.

Connect 4 electric connections of the switch box with 4 suitable, free connections in the hydraulic aggregate. Every connection is provided with a safety device, so that it is impossible to carry out a wrong connection.

Connection of the electric hydraulic aggregate in pneumatic and electric network



Pneumatics connections

Connect the aerial care with the aerial entrance of the air pressure unit (illustration 22); use for it an air pressure pipe (caliper diameter: 7 mm - pressure is adapted to that of the network).

Connection with the mains supply (circuit)

CARE

All works which are carried out in the electrical system of this machine must be carried out, all the same as unimportant they may also be, from a certified expert.

The connection with the mains supply must be carried out with the help of the following instructions:

Power consumption of the hydraulic unit (see call sign badge).

The monitoring equipment which separates the electric hydraulic aggregate and the connection point from the electric network, so that a waste is shown in the electricity supply with entire load-carrying capacity less than 4% (10% during the start) in proportion to the nominal tension, which on the call sign badge, amounts.

The user has to go:

- the electric hydraulic aggregate connect to a terminal box which corresponds to the topical tension standards. The electricity supply must be equipped with a power switch and be protected against surges.
- the electrical system of the vehicle lift earth.

To prevent the use by not authorized staff, we recommend you to bolt the main switch in the switch box with a safety lock.

Connect the hydraulic aggregate with the electricity network

CARE

So that the vehicle lift functions properly, it must be earthed relevant.

Connect the protective earth NOT with gas lines, water lines or telecommunication lines, or other objects which are not planned for this purpose.

11- QUALITIES OF THE SAFETY DEVICES

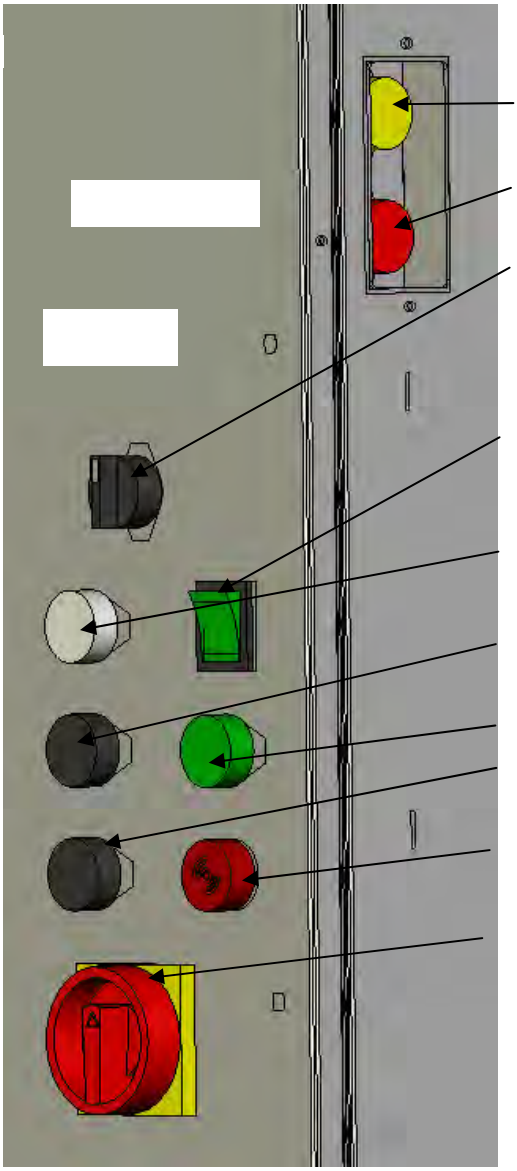
There are 6 different Sciherheitsvorrichtungen.

Purpose of the safety device	What it of is produced and where it is to be found	Effect of the device on the main vehicle lift	Effect of the device on the auxiliary lift
Signaltongeber zum Schutz der Füße	This device consists of a sensor which is near the underside of the main vehicle lift, and an acoustic signal.	The Senkbewegung of both Auffahrschienen is interrupted, as soon as these are only about 150 mm about the bottom. To continue the Senkvorgang, loosen for one moment the key "main vehicle lift lower" and press the key then once more. Then the device gives a discontinuous acoustic signal of itself.	An acoustic discontinuous signal is to be heard during the sinking of the absorption. The Senkbewegung is interrupted if the absorption only about 150 mm is removed from both Auffahrschiene. To continue the Senkvorgang, loosen for one moment the key "auxiliary lift lower" and press the key then once more.
Latch device	This mechanism consists from: in the main vehicle lift: - an attached arrester rod and a safety cam on every cross beam side, as well as an arrester rod in every column. in the auxiliary lift: - a locking handle and an arrester rod on every piston	The locking handle and the arrester rod prevent accidental lowering (in a 100 mm of height area) in case of a mistake in the hydraulic cycle or an Unterbechung in this cycle. Accidental lowering prevents the Sicherheitsnocke on account of a sly absorption tackle.	The locking handle and the arrester rod prevent accidental lowering (in a 100 mm of height area) in case of a mistake in the hydraulic cycle or an Unterbechung in this cycle.
Electronic height control device	This device consists of a photoelectric cell on one of the absorption of the auxiliary lift and a reflector in the other absorption.	This device stops the movement of both lifts, as soon as between both absorption (auxiliary lift) a height difference of more than 50 mm appears or is the height of the runways (vehicle lift) more than 150 mm.	
Hydraulic safety device	The device consists of a boiler safety valve in each of both hydraulic cylinders of the vehicle lift.	This device should slow down the Absenkgeschwindigkeit of both vehicle lifts, if in the hydraulic line a leakage originates. The valve was so stopped that the Senkvorgang can be maximum 1.5 times faster than with normal speed.	
Protection mole place of the fingers	This device consists of a signal strip (yellow / black) on the external scissors of the auxiliary lift.		These strips point to the danger of the Quetschens of the fingers if the scissors are lowered again.
Electric device for the control of the ropes	This device passes of a switch "floppy rope" and a switch "sly rope" at the end of every cross beam.	The switch "floppy rope" stops the sinking of the ramp, if one of the ropes becomes loose. The switch "sly rope" stops all movements of the main vehicle lift and raising the auxiliary lift, as soon as one of the cables tears or becomes extremely loose. Then an acoustic, discontinuous signal shall be heard.	

12 - STEUERUNGEN

Die Komponenten 1 bis 8 sind im Schaltkasten installiert. Komponente 9 ist im unteren Kasten installiert. Die Komponenten 10 und 11 sind an den Seiten des unteren Kastens installiert.

bildung 23



9. Key “electronic adjustment control”

10. Key “levelling of auxiliary lift” (only LT version)

1. Changeover switch main lift/auxiliary lift (only LT version)

2. Light switch (lighting is optional)

3. Key "lifting"

4.Key "descent"

5. Key "stopping”

6. Key “descent in the danger area“

7. Acoustic signal

8. Main switch with safety lock locking mechanism

The components have the following functions:

1. Changeover switch "main stage auxiliary lift" (only LT version)
   With this switch the key price increase is switched to the vehicle lift or the integrated auxiliary lift.
2. Light switch: to switch on the lighting in the lift (optional accessories), put the switch on "1". To switch off them, put the switch back on "0".
3. Key "vehicle lift raise”: the Auffahrschienen are raised by pressures of this key. This key functions only if it is held low-spirited. As soon as you let go the key, it is immediately stopped of the Hebevorgang of the Auffahrschienen.
4. Key “vehicle lift lower”: by pressures of this key the Auffahrschienen or the auxiliary lift fall. This key functions only if it is held low-spirited. As soon as you let go the key, the Auffahrschienen stop.
   The Senkvorgang is shut off in two different phases:
   - As soon as you the key “vehicle lift lower” press, the Auffahrschienen are briefly raised (about 2 seconds) to loosen the mechanical locking handles.
   - Then the Auffahrschienen are lowered up to 150 mm about the bottom and are shut off the Senkvorgang. To lower completely the Auffahrschienen, let go the key and press then once more the keys "stopping" and „depressions in the danger area“ at the same time.Then the Auffahrschienen of the main vehicle lift are lowered completely. During the whole

Senkvorgangs of the main vehicle lift an acoustic discontinuous signal is to be heard to point out the user to be especially attentive during this process (on account of the danger of cuts or cerium bruises on the feet). This key functions only if it is held low-spirited. If you let go one of the keys, the Auffahrschienen immediately stop the Senkvorgang.

5. Key "stopping": press this key as long as, until the locking handles get into contact with the gaps of the arrester rods of all columns, or with the safety fillets in the auxiliary lift.

6. Key „depressions in the danger area“
   The key „depressions in the danger area“ is operated in combination with the key "setting down" to the depression in the danger area. The function is freely switched by operating the supervision switch in the column.

7. Acoustic signal: the sound of the acoustic signal device points to the depressions in the danger area.

8. Main switch with safety lock locking mechanism: to switch on the vehicle lift, put the main switch on "1". To switch off the device, put the switch on "0".

9. Key “electronic adjustment control”: this key may be served only from certified professional service.
   This key functions only if the laser of the photo electric cell is interrupted.
   The electronic control device is stopped by pressures of this key and a cycle is got going for starting the lowering process of both vehicle lifts. This key functions only if it is held low-spirited. If you let go the key, the photo electric cell is activated and stopped the lowering process of both lifts. The application of this key is described in the segment “Adjustment of the auxiliary lifts” of the chapter "closer" "SET-UP".
10. Key “levelling of auxiliary lift”: this key may be served only from certified professional service.
    By pressures of this key the magnetic valve opens the hydraulic cycle between the main piston and the subsequent cylinder of the auxiliary lifts. The absorption can line up wrong or change her position extremely strongly. This key functions only if it is held low-spirited. If you let go the key, the magnetic valve shuts again.
    The application of this key is described in the segment “Use of the alignment of the auxiliary lifts” of the chapter "closer" "SET-UP".

 **IMPORTANTLY**

Are especially attentive if you use the lowering control for both lifts, while the upper part of the vehicle is near the ceiling. The vehicle could bump during the early stage of the lowering process against the ceiling.

13 - INSTALLATION

 **CARE**

The vehicle lift must be installed by certified professional forces which can check then whether the vehicle lift and all mechanical and electric safety devices function properly.

The instructions stand in the chapter "SET-UP" (exclusively as information for the technical customer service or authorized supplier).
The insertion of employees, not from BLITZROTARY. authorized became, must be avoided under all circumstances.

 **CARE**

BLITZROTARY GMBH cannot be made for the damages which originate on account of the disregard of abovementioned instructions responsible. Then the guarantee becomes trifling and goes out.

14 - Regular servicing

 **CARE**

The notebook about the spare parts authorized the user of the vehicle lift not to carry out servicing works unless, they were expressly performed in this document. There is to the operator, however, the duty to give the maintenance staff or the supplier explicit tips, so that repair can be faster carried out.

 **CARE**

Only the genuine parts which were supplied by an supplier may be used. If this is not the case, becomes BLITZROTARY any responsibility reject, and the guarantee becomes trifling and goes out.

 **CARE**

It is forbidden to carry out changes in the setting of the hydraulic pressure limiter.
BLITZROTARY assumes no liability for damages which originate on the basis of effects on this pressure limiter; then the guarantee becomes trifling and goes out.

 **CARE**

Separate the vehicle lift before the realisation from servicing or setting works of the electric and pneumatic mains supply. Check, moreover, that all mobile parts are protected.

 **CARE**

Decontaminate or change parts of the vehicle lift only about the technical customer service from the suppliers.

 **ESTEEM**

Keep clean the field of work completely.
Use no air pressure, water nozzles, flux or aggressive cleaning agents on the spraying or the working parts to remove dirt or residues from the vehicle lift.
To **tests to cause you with the cleaning so little dust as possible.**
The servicing may be carried out under no circumstances by not authorized employees.

To hold the vehicle lift in flawless state, obey please the following instructions, clean and check it weekly, and lead you visual

checks to the examination of the flawless functionality of all safety equipments of the vehicle lift by.

Cleansing works and regular servicing must be carried out under deduction of the following instructions:

- pay attention with the cleaning and servicing to the safety. Head and auxiliary lift must be in the mechanical safety setting.
- Put the main switch on the position "0" and interrupt the circuit which connects the panel with the mains supply.
- Interrupt the pneumatics cycle which connects the panel with the air pressure care.
- Make sure that the panel receives no more air pressure. The pressure measuring instrument should indicate a pressure of zero.

Check the situation of the hydraulic oil in the electric hydraulic aggregate:

- lower the driving mechanism trajectories (main vehicle lift) and the absorption (auxiliary lift) completely.
- check with the dipstick the hydraulic oil situation. If inevitably, refill suitable oil (see following table).

  Additional oil must be added about the filling cap.

Blow off about of all 1000 hours of operation the hydraulic oil from the tank (11 litres of capacity).

Check the oil level of the air-lubrication device (illustration 19).

If the situation is lower than the mark on the boiler, add vaseline oil (see following table) and continue as follows:

- loosen the stopper of the air-lubrication device, fill the boiler up to the mark and screw the stopper then again with the hand.
- blow off the drops which have remained in the air filter boiler with the help of the drain cock under the boiler. Put a container under the drain cock to absorb the drops and not to dirty the columns.

Make sure that the oil tank is completely clean. New oil must not be filtered.

Lubricate moving or elastic parts. Use for it the lubrication devices on the vehicle lift or a spatula (illustration 24).

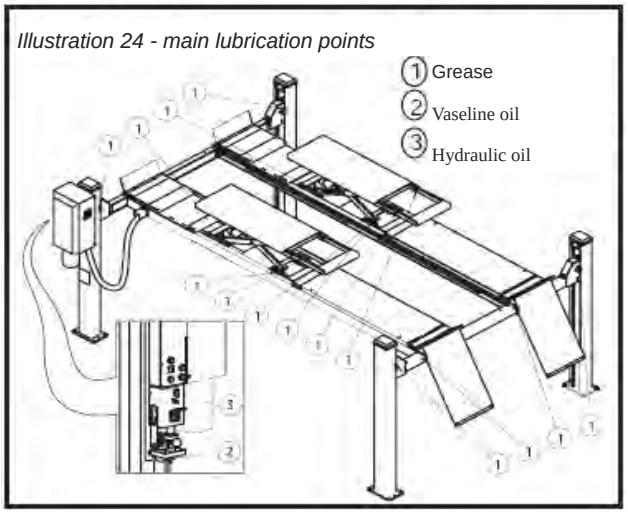
Lubricate the absorption tackles and the keyway surfaces of the rope rolls with a brush.

Only At version: Set down both rear movable plates, after you have loosened this of the attached setting.

Clean the sphere records and spray this then with oil one.

Screw on the rear movable plates again.

Illustration 24 - main lubrication points



• Recommended oil and grease:

Brands	Hydraulic oil	Vaseline oil	Grease
GESAMT	AZOLLA 32	LOBELIA SB 15	
ELF	OLNA DS 32	ALBELF ID 15	
ESSO	NUTO 7132	MAYOLINE 263	
BP	BARTRAN 32	ENERGOL WT 1	

Check, extremely carefully, the hydraulic lines and pneumatics lines that these no damages or wears and tears show on account of the grating against moving parts of the vehicle lift, against cutting edge edges or foreign objects.

If you discover one of these deviations, turn to the admitted technical customer service team of the supplier.

Check whether bolts and nuts are tightened, in particular in the stands which are fastened on the bottom.

All 12 months must be checked the cables by an authorised person.

Clean the vehicle lift with the help of a cleaning agent which does not attack the varnish and pay attention particularly to foreign objects which could lead to the fact that the mechanical, electric or pneumatic safety devices function not properly.

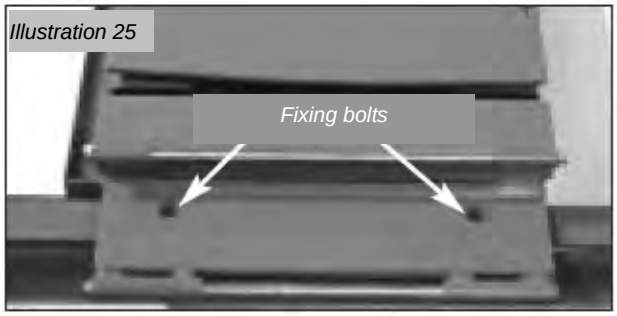
15 - Instructions for use

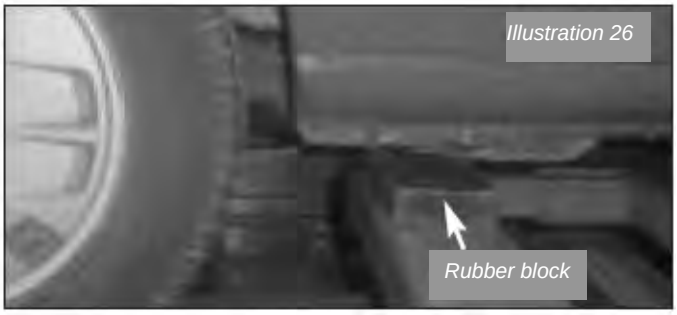
The vehicle lift may be served only by authorised staff. The use of the vehicle lift could be very dangerous if the operator does not know the information contained in this manual.

FUNCTIONALITY OF THE VEHICLE LIFT

Positioning of the vehicle on the vehicle lift ramps:

Check whether the weight of the vehicle does not amount more than 4,000 kg (if it is lifted on the main vehicle lift) or 3,000 kg (if it is lifted on the auxiliary lift).
The weight distribution must correspond in the chapter "AREA OF APPLICATION" noted distribution.
The values shown in this chapter may be crossed by no means, so that the safety of the operator is not endangered.
Before the vehicle on the vehicle lift is positioned, check whether the guide rails are properly stopped, so that a centring of the length and after width can be carried out. If necessary you remove 4 screws which are at the end of the movable ramp (fig. 25) and place them at the side, so that the screws can be positioned according to rail requirement.
Check whether the fulcrums on the vehicle bottom agree exactly with the bases of the auxiliary lift and whether there is enough place to the fixing of the provided rubber blocks(fig. 26).





Tighten the hand brake to avoid dangerous movements.
Drive the auxiliary lift upwards, around the extract if necessary which are at the end of the platform of the auxiliary lift to remove.
Check whether the platform extracts do not stand in direct contact with the vehicle case. Before the vehicle is raised, is to be checked whether all rubber blocks are positioned correctly and stably.

CARE

The vehicle may be raised only in by the manufacturer for this purpose to marked points. Only accessories of BLITZROTARY may be used.

CARE

If the vehicle lift is moved upwards or below, these movements must be evenly carried out, so that the load does not shift. If the vehicle does not remain stable or some irregularities are noted in the vehicle lift, all movements are to be finished immediately. If necessary the vehicle with big circumspection and attention must be lowered to the bottom. Check and correct if necessary the position of the vehicle. If the vehicle is not stable yet, turn the main switch on "0" and turn to the technical customer service team authorised by the supplier.

Examination of the acoustic signalling systems

Go forward as follows to check the acoustic warning system:
Put the main switch on position "1" and press the key “main vehicle lift lift”, until the Auffahrschienen reach a height by chance 1 m.
Place (not reflective) test part on the photo electric cell to interrupt the laser.
There sounds an acoustic discontinuous signal. If this is not the case, contact please the customer service admitted by the suppliers.
Remove the test part from the photo electric cell.
Press the key "main vehicle lift lower" and put back the runways on her starting position.

Emergency -Switch

Around the vehicle lift if necessary (wrong functionality to stop failure) you put the main switch on "0" and you interrupt the pneumatics cycle which connects the panel with the air pressure care. Check that the panel receives no more air pressure. The pressure measuring instrument of the air pressure unit should indicate a pressure of zero.

ESTEEM

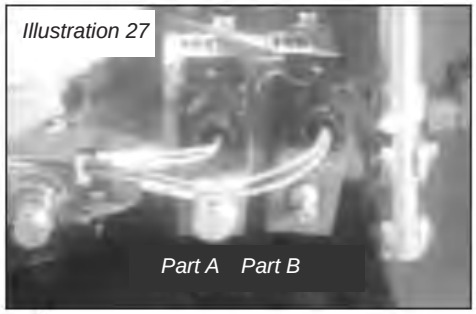
During the use of the vehicle lift nobody may stand under the vehicle. Objects (for example, tools) may not hinder the movement of the runways and cross beams up to their final position. Put in case of a failure the main switch on "0". Checks of the vehicle lift may be carried out only by authorised and certified staff. Close the main switch and separate if necessary the electric and air pressure care, before you carry out servicing works or repair.

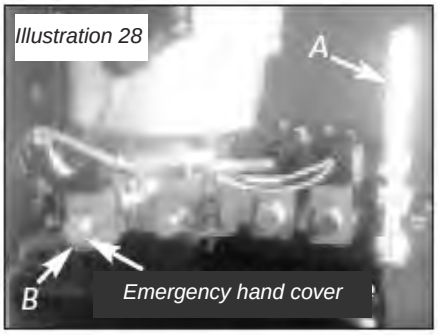
16 - MANUAL descent

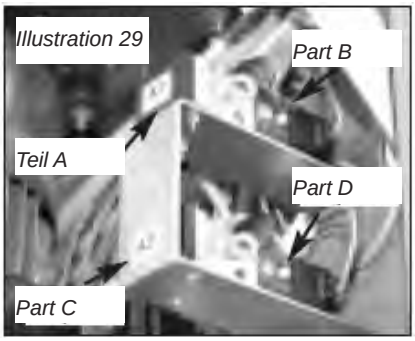
THE VEHICLE LIFT IN CASE OF AN INTERRUPTION OF THE ELECTRICITY SUPPLY LOWER BY HAND

To lower both vehicle lifts in case of an interruption of the current supply, turn the main switch on "0", take the cover of the electric hydraulic aggregate and follow the next 4 steps.

<table>
<tr><td>Step 1</td><td colspan="2">Preparation of the lowering process</td></tr>
<tr><td></td><td>Main vehicle lift</td><td>Auxiliary lift</td></tr>
<tr><td></td><td>Loosen and take the cover of emergency hand and open the thread spindle of the magnetic valve of the main vehicle lift (illustration 27 - part A).</td><td>Loosen and take the cover of emergency hand and open the thread spindle of the magnetic valve of the auxiliary lift (illustration 27 - part B).</td></tr>
<tr><td>Step 2</td><td colspan="2">Both vehicle lifts begin</td></tr>
<tr><td colspan="3">Start with the lever the hydraulic pump (illustration 28 - part A) to raise both vehicle lifts, and loosen then the mechanical safety handles.</td></tr>
<tr><td>Step 3</td><td colspan="2">The mechanical safety hooks solve</td></tr>
<tr><td></td><td>Main vehicle lift</td><td>Auxiliary lift</td></tr>
<tr><td></td><td>Start the pneumatic magnetic valve A1 (illustration 29 - part A), while you hold the key (illustration 29 - part B) low-spirited during the whole lowering process.</td><td>• Start the pneumatic magnetic valve A2 (illustration 29 - part C), while you hold the key (illustration 29 - part D) low-spirited during the whole Senkvorgangs.</td></tr>
<tr><td>Step4</td><td colspan="2">Both vehicle lifts lower</td></tr>
<tr><td colspan="3">• Loosen and remove the cover of the emergency hand; loosen then carefully the thread spindle of the common hydraulic magnetic valve (illustration 28 - part B) to allow lowering the vehicle lift. Observe the speed of lowering by the use of the thread spindle.
• Switch off, as soon as the vehicle lift is lowered completely, the hydraulic magnetic valve, while you tighten the screws in every magnetic valve.
• As soon as the feed is connected again, you lift the vehicle lift without vehicle and lower to check whether this functions perfectly.
If the vehicle lift functions not properly, contact the customer service.</td></tr>
</table>







CARE

During the whole lowering process it is absolutely necessary to lock the danger zone and to prevent access for each**. authorized and certified expert which carries out this work must be very attentive. She must pay attention to the fact that all duties are continuously explained and must observe consecutively the stability of the load. Stop, if the vehicle shows instability, immediately the manual lowering process.**

RESTART OF THE VEHICLE LIFT AFTER A FALSE ADJUSTMENT OF THE RUNWAYS

If the vertical height difference of the driving rails is greater than 50 mm, this is signalled by an acoustic warning system and none of the controls is functioned, as soon as the main vehicle lift is more than 150 mm about the bottom.

A false adjustment can appear, if:

A foreign object blocks the lowering process of the vehicle lift: remove the annoying foreign object.

a mechanical locking handle is still activated: check whether the mechanical safety devices function properly.

The load is distributed irregularly:

Lowering and realignment of the vehicle lift must be carried out like in chapter "SET-UP" segment “Readjustment of the auxiliary lifts” described by a certified and authorized expert.

If the problem consists furthermore, contact please the customer service authorized from the suppliers.

RESTART OF THE VEHICLE LIFT AFTER LONGER DISUSE OR AFTER A TACKLE HAS TORN

If one of the tackles of the main vehicle lift unusually laxly or has torn, you will hear an acoustic warning signal and all controls of both stroke facilities do not function any more. This can happen, if:

A foreign object blocks the lowering process of the vehicle lift: remove the annoying foreign object.

The runways are diagonal: compensate this like in the segment “Compensation of the main vehicle lift” of the chapter "SET-UP" described.

A tackle is loose for some obscure reasons: hang up the tackles once more as in the segment “Both lifts begin” of the chapter "manual lowering process" described. Switch off the hydraulic magnetic valve by screw connection of the gearwheel.

A tackle is broken: put the main switch on position "0". Check both tackles. Substitute for both tackles, if necessary.

If the problem consists furthermore, contacts please the customer service.

17 - STORAGE

If you store the device for a longer period, separate the feed, empty the tank full with liquids (s) and protect the parts which could become broken by the education of dust.

18 - DISPOSAL

If the vehicle lift is not used any more, you make this unsuitable, while you separate the electric hydraulic aggregate from the stroke columns.

Make the parts which show a danger incompetently.

Classify the materials according to her usability.

Decontaminate different materials like waste metal and electronic components about suitable counters.

Hazardous waste must be diminished and be classified and be decontaminated afterwards according to the local rules and directives.

19 - INFORMATION AND WARNING TIPS TO THE OIL

Disposal of used oil

Decontaminate used oil not in drain, drainage ditches or waters. Keep it in special containers to let decontaminate it of special companies.

Losses and spillage

Cover spillage of the make on the floor with sand or other absorbing materials. Then the dirty area must be cleaned with the help of solvents as fast as possible by lubricating, before toxic vapours become free. The residues which have stayed behind after the cleaning must be removed according to the suitable directives of the local legislation.

Cleaning and precautions

Avoid shell contact

Avoid the education and distribution of vapours in the air

Keep to the following precautions:

- Avoid an splash about
- Regularly with soap water clean; use no irritating or solvents which could damage the suet gland surface of your shell
- Wipe your hands not with dirty or oily cloths
- Change the clothes, if this becomes fatty, or at least at the end of your working day.
- Do not smoke or eat with dirty hands

Keep to the following preventive measures:

- Carry felt-fed, oil-repellent gloves
- Carry safety glasses to protect yourselves from splashes
- Carry oil-repellent suits
- Use a view protection to protect yourselves from splashes.

Oil makes: The first help

To gulps: Call an emergency medical service and describe in detail which kind of oil was taken.

Inhalation: bring the injured person who was put out to high concentrated vapours of the oil to the fresh air and then to the next hospital or in the provisional accommodation.

Eyes: with richly water you rinse and contact the next hospital or the provisional accommodation.

Shell: wash away with soap water.

20 - FUNCTIONAL PROBLEMS

Check whether the main switch stands on position "1" that the electricity supply is flawless and indicates the pressure measuring instrument on the FRL aggregate at least one pressure of 6 bars.

IRREGULARITIES	CAUSES	REMOVAL
Oil escapes	Hydraulic connection broken. Defect pipe or defective connection	Connect the pipe once more Substitute for the pipe or for connection piece.
The vehicle lift reacts to none of the controls, but no acoustic signals are delivered.	The fuses are broken. The temperature protection was separated. The transformer is broken.	Substitute for the fuses. Connect the temperature protection once more. Substitute for the transformer.
The engine runs, but the vehicle lift reacts to none of the controls	Wrong connection within the switching circuit.	Adjust the connections in the electricity network (you decrease 2 steps).
If the main vehicle lift is more than 150 mm high, an acoustic signal is to be heard and the vehicle lift reacted on none of the controls more, except on the key "electronic adjustment control"	False adjustment of the absorption or beside absorption, recognised by the Anti Fehlausrichtungs device.	Find out closer in the segment “Restart of the vehicle lift after a false adjustment of the absorption” of the chapter "MANUAL LOWERING "
The vehicle lift reacts to none of the controls; only the auxiliary lifts can be lowered. A warning signal is to be heard.	• Der Störschalter einer der vier Synchronisations-Seilzüge wurde aufgrund eines ungewöhnlich lockeren oder beschädigten Seilzugs aktiviert.	• Informieren Sie sich näher im Abschnitt “Neustart der Hebebühne nach längerem Nichtgebrauch oder nach dem Riss eines Aufnahme-Seilzugs” des Kapitels “MANUELLER SENKVORGANG”
If you the stroke key dücken, are raised the vehicle lift (main vehicle lift or auxiliary lift) and stop then, but the engine goes on.	Insufficient oil level. Load too hard. Wrong setting in the excess-pressure valve.	Check the oil level. Check the load. Check the hydraulic pressure (illustration 30).
If you press lowering key, the vehicle lift (main stage or beside stage) is raised, then lowered and stopped after some centimetres.	The pneumatics magnetic valve for the mechanical safety mechanism is not supplied with air pressure.	Check the connection to the air pressure network. If the problem consists furthermore, contact the customer service.
If you press lowering, the main vehicle lift does not react.	One of the contacts was activated, because the cable is slack	Lift the main vehicle lift once more to stretch the tackles again. If the problem consists furthermore, contact the customer service.

NB: the air pressure measuring instrument is not included in delivery.

21 - FIRE EXTINGUISHER

To select the best fire extinguisher, keep please to the following table:

Dry materials	
Pulverised water	**YES**
Foam	**YES**
Powder	YES*
CO2	YES*

Ignitable liquids	
Foam	**YES**
Powder	**YES**
CO2	**YES**

Electric devices	
Powder	**YES**
CO2	**YES**

YES * : applicable with absence of more actual fire fire-fighting methods, or in case of smaller fires.

 **CARE**

The tips in this table are intended for general situations and as general instructions for all users. Check the insertion possibilities of every fire extinguisher with the manufacturer.

22 - Setup (exclusively as information for the customer service admitted by the supplier / supplier)

The assembly of the vehicle lift must be carried out by employees who have received a suitable training and which are able to check whether the vehicle lift runs perfectly, also to their electronic, pneumatic and mechanical safety devices.

UNDER NO CIRCUMSTANCES THE VEHICLE LIFT MAY BE SET UP BY NOT CERTIFIED EMPLOYEES.

The electronic, hydraulic and pneumatic installation expiries, as well as those of the safety devices and accessories, are described in the following segments closer.

Obey the set-up process like in these segments described, so that the function of the vehicle lift is not affected and future users are not endangered.

 **CARE**

BLITZROTARY assumes no liability for damages which originate on account of the disregard of the following instructions. The guarantee thereby becomes trifling and goes out.

CIRCUIT

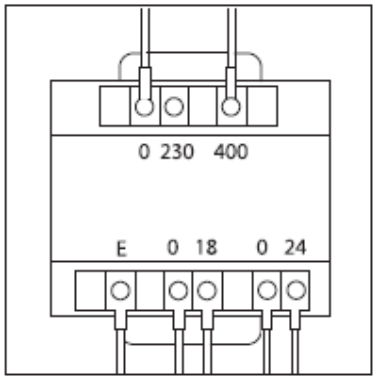
Go forward as follows to connect the switchboard of the electric hydraulic aggregate to the electricity network of the panel:

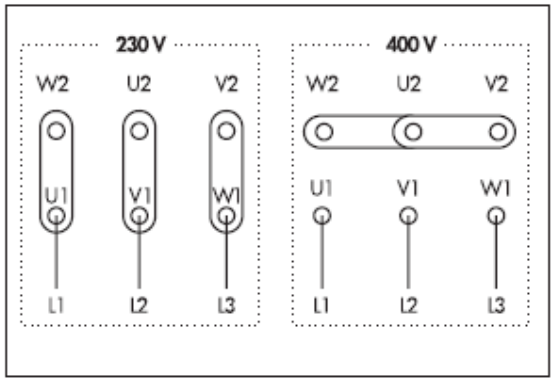
Make sure that the current is connected and that the network fuses are the right ones (16 A)

The vehicle lift ordinarily works with 400 V and her connections are laid out on this tension.

If the tension amounts to 230 V, go forward please as follows

- Separate from the transformer the wire which is on the connection with the mark 400 V, and connect this with the connection with the mark 230 V (illustration 31).
- Take the cap from the engine terminal box.
- Loosen the M5 bolts and change their position (illustration 32).
- Screw on the M5 bolts again and put the cover again on the terminal box.
- Illustration 33 shows the connection of the engine coils.
- Put the temperature safety device on the valve like in the chapter “TECHNICAL QUALITIES” described.





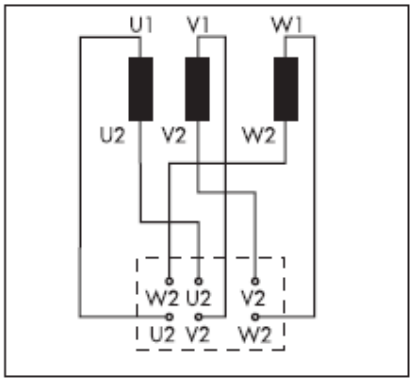


Illustration 31 - Position of the wires on the transformers

Illustration 32 Positioning of the beams in the engine terminal box.

Illustration33 - Connection of the coils

Check the functions of the panel and make sure that these correspond precisely to the representations in the flow sheet.

If the electric hydraulic aggregate was connected to the electricity network and was put the main switch on the position "1", the panel is activated. Press some seconds the key “main vehicle lift” and check the rotation direction of the engine. If the movement does not correspond to the direction which is shown by the arrow on the engine, then turn around two three steps of the electric feed cable.

Repeat now the test.

HYDRAULIC AND PNEUMATIC CIRCUIT

Go forward as follows to set up the hydraulic aggregate:

Put the dipstick to the place of the cap on the oil tank.

Switch on the panel, while you put the main switch on the position "1".

Lift and lower the vehicle lift several times from above down to take away residues of remained air from the hydraulic cycle. The vehicle lift may carry no load during this check.

Check that are in the connection pieces no hydraulic or pneumatic leak.

Check that the hydraulic oil level is correct, while the vehicle lift is in the starting position.

Check whether the pneumatics pipe and hydraulic pipe are positioned properly and that these do not rub against moved parts.

EQUIPMENT PNEUM. PRESSURE CONTROL VALVE

Setting of the air pressure

Lift and turn then the key about the pressure take-up motion, until the pressure needle stands in the pressure measuring instrument between 6 and 8 bars.

If it is not possible to reach this pressure, check the air pressure network.

Setting of the oil flow in the air-lubrication device

Turn the adjusting knob about the air-lubrication device to achieve the desired river (1 drop of oil should drip of all 10 seconds in the point of the lubrication device. Illustration 19)

SAFETY DEVICES

Check the flawless functionality of the safety device „depressions in the danger area“

Press the key “main vehicle lift” and hold this to the runways are about 1 m high.

Press the key “main vehicle lift lower” and check whether the runways stop about 150 mm about the starting position. Finish the test run with entire lowering of the vehicle lift. During this last phase a discontinuous warning signal must be to be heard.

Check the flawless functionality of the electronic control device.

Hold the key “main vehicle lift” low-spiritedly to the runways are about 1 m high.

Lay a not reflective test part on the photo electric cell to interrupt the laser.

Press the keys “main vehicle lift lower” and “auxiliary lift lower”. These controls may not function and it should sound only one warning signal.

Remove the not reflective test part.

Check the flawless functionality of the electronic tax device for (loose) tackles.

Let the main vehicle lift on the clamps of the arrester rods rest, so that these are absolutely floppy.

Press the "main vehicle lift of safety key". This control may have no effect. Now the tackles should not be loose any more and the warning signal any more not sound.

Check the flawless functionality of the electronic control for the tackles (rope fissure).

Make sure that the vehicle lift carries no load.

Press the key "main vehicle lift" and loosen this if the runways on half a height are.

Put a chunk of wood between the bottom and one end of the cross beams.

Press the key "main vehicle lift lower", so that the end of the cross beams with the wood comes to contact, until the tackle of the cross beam is completely floppy; check then:

- the fact that the main stage interrupts her Lowering process and that all Controls of both vehicle lifts, except the key “auxiliary lift do not lower” function.
- the fact that the acoustic signal sounds
- the fact that the safety block blocks the arrester rod at the end of the cross beam at which also the chunk of wood is.

Repeat the test, while you lay the chunk of wood successively under the ends of all cross beams.

Lift the main vehicle lift once more like in the segment "Restart of the vehicle lift after longer disuse or after the fissure of an absorption tackle” of the chapter "MANUAL LOWERING PROCESS".

Setting of the electronic tax device for the tackles

Lift the main vehicle lift on half a height and check with the fact that the handles have not engaged in the gaps of the arrester rod.

Measure and take down the distance (A) horizontally between the axis (illustration 34) and the outside of the column.

Set down the main vehicle lift on the gaps of the arrester rods, so that the ropes are completely floppy.

Lower the level tool (illustration 34) by hand to establish the first contact (loose contact). Measure the distance B horizontally between the wheel axle (illustration 34) and the outside of the column.

Produce, if necessary, the loose contact, while you shift the attached block, so that the difference from distance amounts to B and to distance A the value of 22 mm (±2mm).

Lower the Nivellierer (illustration 34) by hand to adjust the second contact (interruption contact). Measure the distance C horizontally between the wheel axle (illustration 34) and the outside of the column.

Adjust, if necessary, the interruption contact, while you shift the attached block, so that the difference from distance amounts to C and to distance A the value of 28 mm (±2mm).

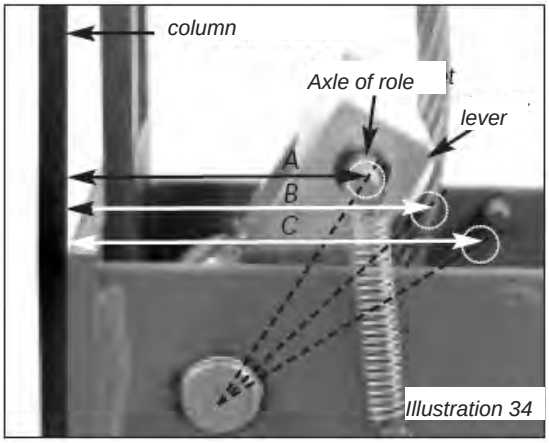
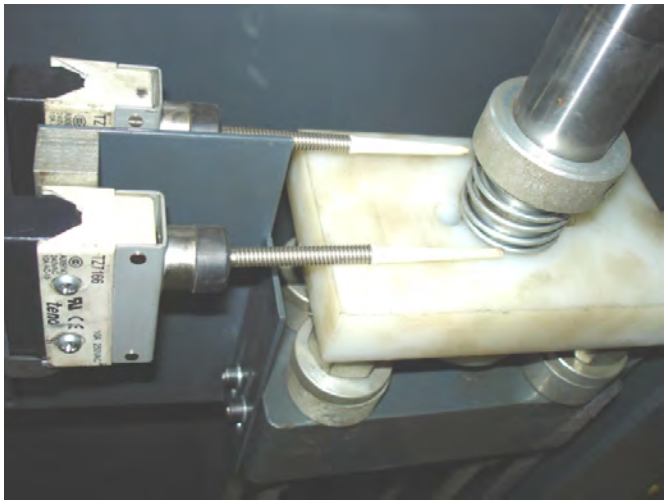


Illustration 34

On the new system are the switches for the broken and slack cable on the cable attachment on the piston rod.
The switch with the first contact is the slack cable switch.
If the switch contact closed the lowering process stopped.
The lift movement is only raise.



ADJUSTMENT OF THE AUXILIARY LIFTS

The adjustment may be carried out only without load on the vehicle lift.
If the vehicle lift more than 150 mm about the bottom is bigger and the false adjustment the absorption of the auxiliary lifts than 50 mm is, this is indicated by a warning signal and none of the controls functions more.
Auxiliary lift side with a main cylinder (d=110 mm) is lower than the auxiliary lift side with the subsequent cylinder (d=100 mm).

- Loosen and take the access record under the panel.
- Hold the key "auxiliary lift level" low-spiritedly (illustration 23, segment 11); press then at the same time the key “electronic adjustment control” (illustration 23, segment 10).
- If you hold these keys low-spirited, the adjustment process is carried out: the absorption with the subsequent cylinder, is raised for a short moment, then both absorption is lowered and aimed, as soon as they reach the bottom.
- Let go the keys.

  If the false adjustment is corrected during the process, the warning signal and the process goes out is broken off.

Auxiliary lift side with the subsequent cylinder (d=100 mm) is lower than the auxiliary lift side with a main cylinder (d=110 mm).

- Loosen and take the access record under the panel.
- Hold the key "auxiliary lift level" low-spiritedly (illustration 23, segment 11); press then at the same time the key “electronic adjustment control” (illustration 23, segment 10).
- If you hold these keys low-spirited, the adjustment process is carried out: the auxiliary lift side with the subsequent cylinder is raised for a short moment, and afterwards both absorption.

Let go the keys, before the absorption is lowered. Repeat the process as often as inevitably.

If the false adjustment is corrected during the process, the warning signal and the process goes out is broken off.

to shut off Around the adjustment process for both absorption:

- lower the main vehicle lift and the auxiliary lift up to the starting position.
- hold the key "auxiliary lift level" low-spiritedly and press at the same time the key “auxiliary lift lower”.
- While you hold the keys low-spirited, the absorption is aimed.
  Let go the keys.
- Put the absorption back to her position.

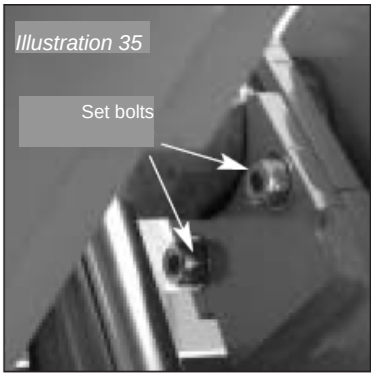
MANUal ADJUSTMENT OF THE AUXILIARY LIFTS
(to apply only if on top described adjustment process could not repair the problem).

- Loosen and take the access record under the panel.
- Lower both vehicle lifts and auxiliary lift completely, while you hold the key "electronic adjustment control” low-spirited (illustration 23, segment 10).

  Example 1: Absorption with the main piston (d 110 mm) is lower than the absorption with the subsequent cylinder (d 100 mm).
  - Hold the key "auxiliary lift level" low-spiritedly, and press at the same time the key “auxiliary lift lift”.
  - Let go the keys if the Auffahrschienen are compensated.

  Example 2: Absorption with the subsequent cylinder (d 100 mm) is lower than the absorption with the main piston (110 mm)
  - Hold the key "auxiliary lift level" low-spiritedly, and press at the same time the key “auxiliary lift lift”.Die absorption with the subsequent cylinder it is raised for a short moment and then is lowered. Let go the keys if the Auffahrschienen are compensated.
  - Put the ramps back to her position.

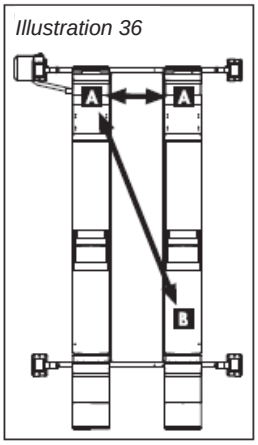
Setting of the locking handles of the auxiliary lifts
The locking handles on the left and right side of the auxiliary lifts should hit at the same time on the clamps. If this is not the case, adjust the situation of the locking handles with the help of 4x M10 to bolt (illustration 35).



LEVELLING OF THE MAIN VEHICLE LIFT

The levelling of the vehicle lift should guarantee that the transverse tolerance of ±1 mm is reached, and also a diagonal tolerance of ±2 mm (illustration 36) to check the adjustment of the driving mechanism rails and to stop.
Use for the levelling a perpendicular cable, an adjustment oscilloscope and suitable marks in the Punken A and B.
The below described levelling processes are complementary and must be carried out in the order successively.

Illustration 36



Setting of the columns

Check with the help of the perpendicular cable that every column is vertical.

If one of the columns is vertical not completely, go forward as follows:

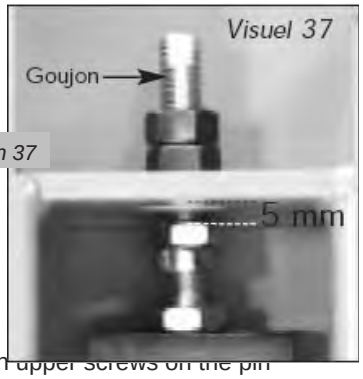
- Loosen the M16 bolts on the base plate of the column.
- Straighten the column with the help of 3 M16 x 40 adjusting screws completely vertically.
- Lay the original blocks carefully under the foot of the column to hold them vertical.
- Press the column in the direction of the cross beam; leave 0.5 mm of distance betweender Column and the both to attached plastic guides at the side of the cross beam.
- Screw 4x M16 bolts again onto the record of the column.

Adjust the locks&latch bars

- Check that the grubscrew and the fixing bolts of every catch seaweed so far as possible have engaged (illustration 37)
- Heben Sie die Haupt-Hebebühne bis auf 1 m und lassen Sie diese dann auf den Klammern des Fangstanges ruhen.
- Remove the bolt and the M30 safety nut at the end of every absorption tackle and remove the thread from every column (illustration 38).
- Observe the situation of the driving mechanism ways with the levelling oscilloscope, while you put on the printed in halftone clamp successively in the points A and B.

Thread

Illustration 37



- If this value does not lie within the tolerance, ascertain the driving mechanism ways with both upper screws on the pin thread every Zahstangenantriebs (Abbidlung 37).

  Entfernen Sie nicht die Befestigungsschrauben, die die Antriebswege stützen.
- Put back the thread ends of all tackles in every column and screw the bolt and the M30 safety nut again (illustration 38).

Setting of the absorption tackles

- Observe every absorption tackle along the whole length to check them for possible damages.
- Loosen 8 pieces M10 tackle-attachment nuts in the rope terminals (illustration 39) old system.

Abbildung 38

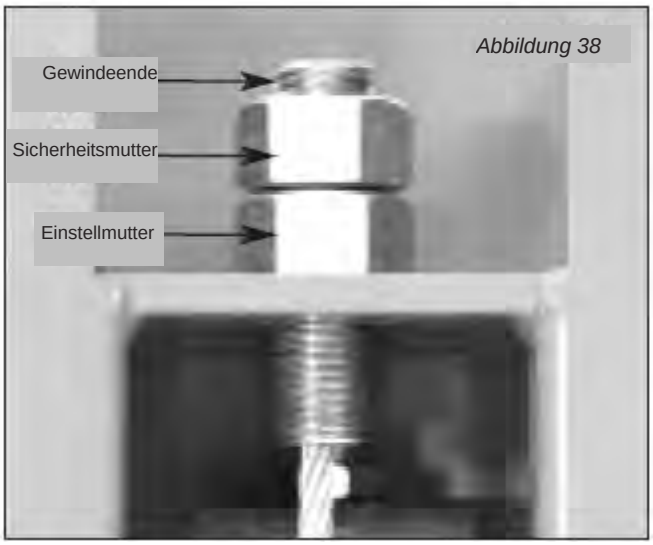
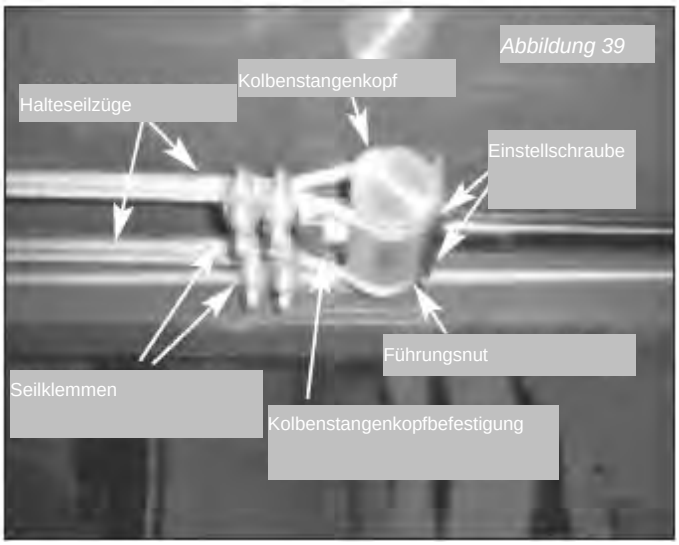
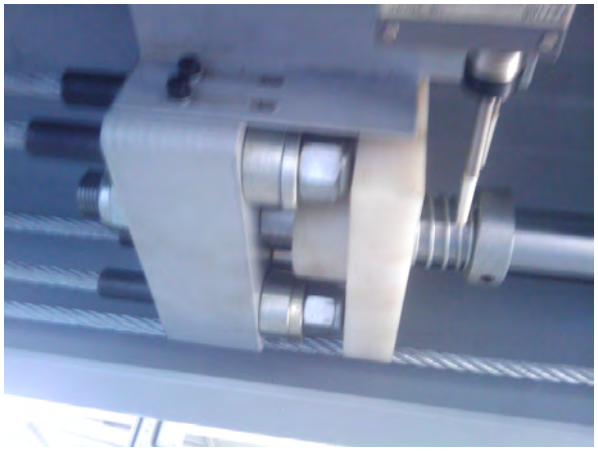


Abbildung 39





The new system of cable connection and cable control switches.
Please not remove the springs in the inside of the attachment.
The springs are necessary for the function of the cable control.

- Lower the vehicle lift up to the bottom.
- Centre a vehicle with a weight by chance 2 t on the driving mechanism ways. It should be centred along as well as across-sided.
- Press the key "mechanical safety device of the main vehicle lift activate" for approximate 5 seconds to compensate the length of the synchronisation tackles.
- Raise the runways on about 1 m.
- Screw on 8 pieces M10 cable attachment nuts, 2 pieces M25 screwing and 2 pieces STH 10 x 15 guide record locking screwings again (illustration 39).
- Adjust the length of the synchronisation tackles (illustration 38) with the M30 to bolt on the thread end of every tackle, so that the clamps are connected at the same time with the wedges of the catch seaweed.
- Fasten the M30 safety nut at every tackle end.

INSTALLATION OF THE ACCESSORIES

After you have carried out all tests and settings, finish the installation process please as follows:
four rope roll lids of the cross beams
the lid of the electric hydraulic aggregate.
the entrance ramps.
the front buffers (keyways should point at the outside of the vehicle lift).
four column caps

REGULAR EXAMINATION

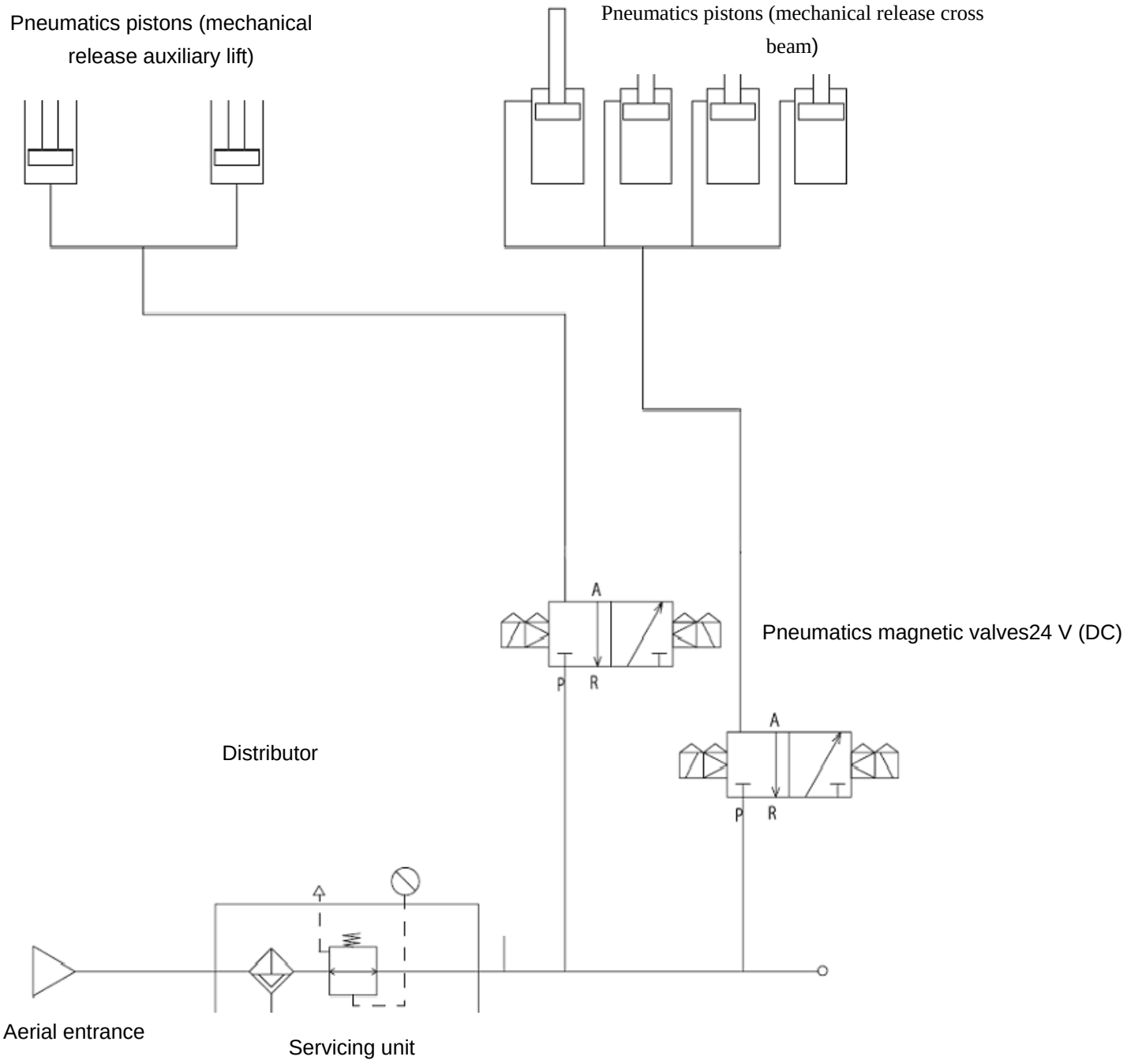
The vehicle lift must be waited regularly and be examined, besides, for wear state and effectiveness:
of all 3 months from the date of the installation:

- the absorption tackles check.

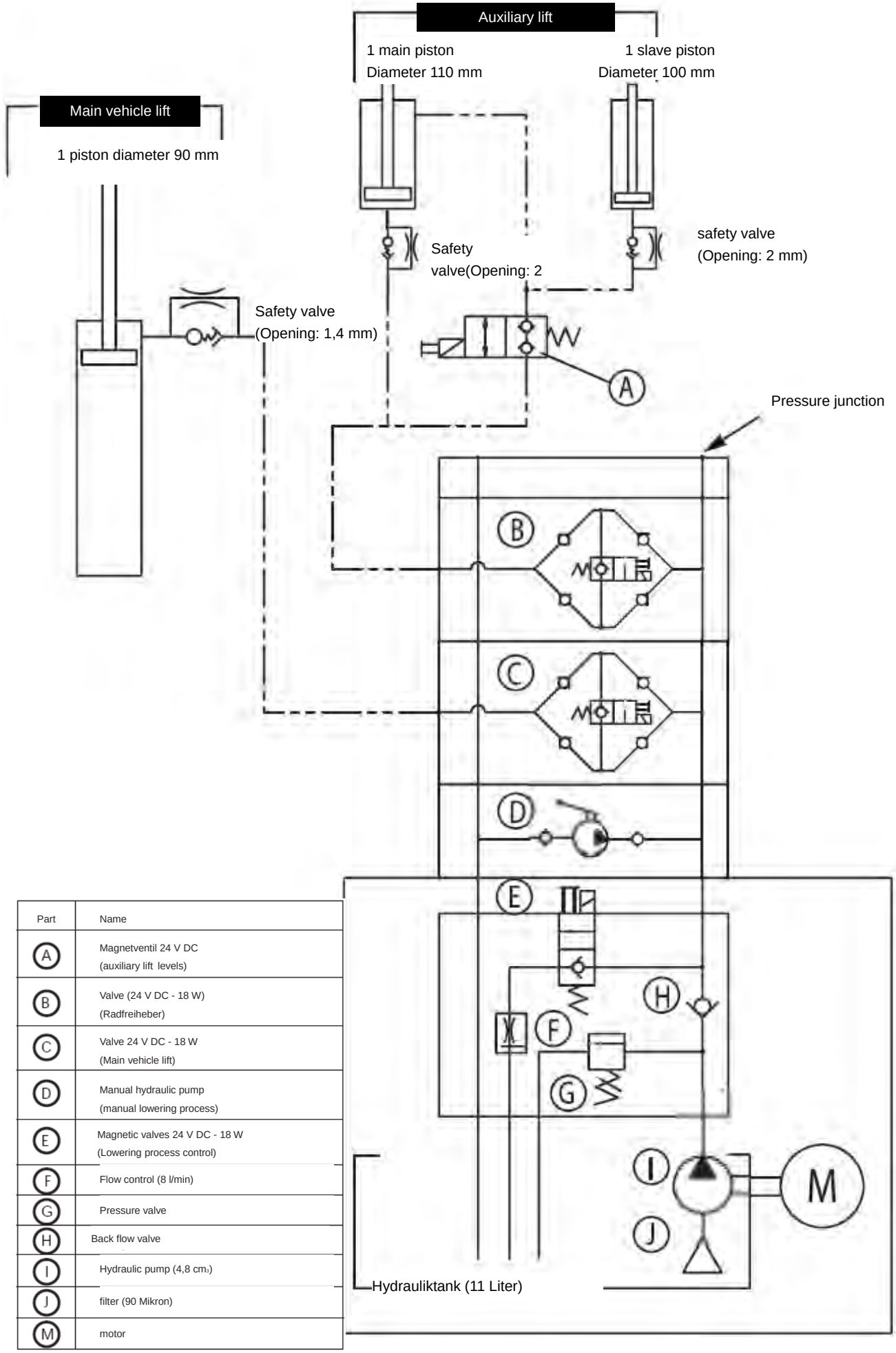
of all 12 months from the date of the installation:

- the general wear check.
- a test to the examination of the load load-carrying capacity carry out.
- the safety devices check and stop.

23 - PNEUMATICS FLOW SHEET



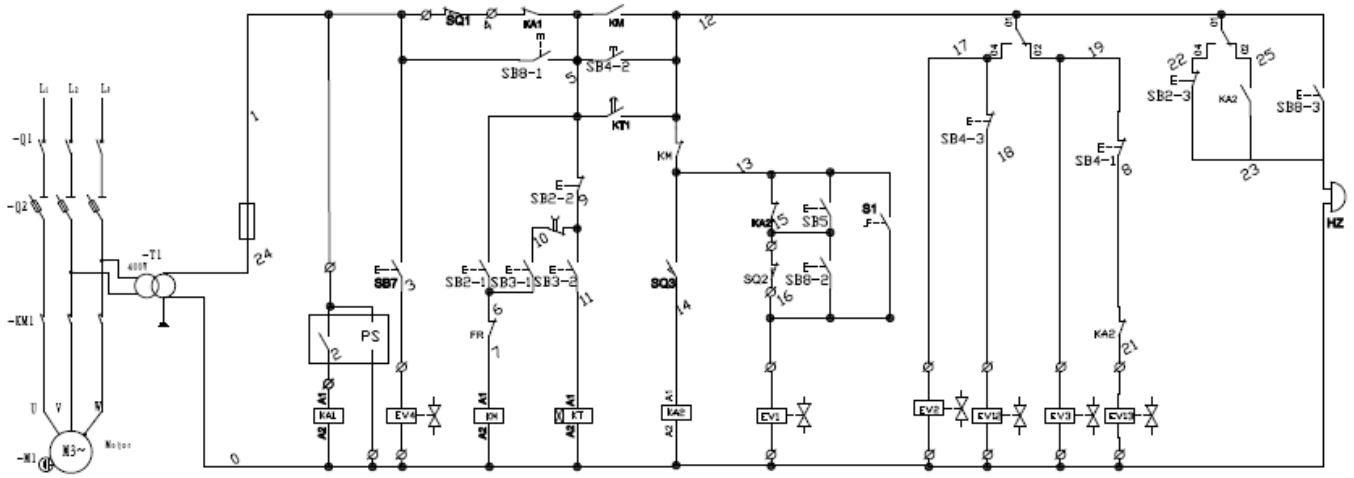
24 - HYDRAULIC FLOW SHEET



Part	Name
A	Magnetventil 24 V DC (auxiliary lift levels)
B	Valve (24 V DC - 18 W) (Radfreiheber)
C	Valve 24 V DC - 18 W (Main vehicle lift)
D	Manual hydraulic pump (manual lowering process)
E	Magnetic valves 24 V DC - 18 W (Lowering process control)
F	Flow control (8 l/min)
G	Pressure valve
H	Back flow valve
I	Hydraulic pump (4,8 cm_3)
J	filter (90 Mikron)
M	motor

25 - ELEKTRISCHER SCHALTPLAN

EV13	Pneumatics magnetic valve for the locking handles of the main vehicle lift
EV12	Pneumatics magnetic valve for the locking handles of the auxiliary lifts
HZ	Acoustic warning signal
CP1	thermic protection
KM1	contactor
ES1	Levelling key of the auxiliary lifts
ES2	Electronic Nivelliersteuerungstaste
FR	Temperature safety device in the engine
F2	Fuse main current circle
F3	Fuse main current circle
F4	Fuse main current circle
F5	Fuse control current circle
F6	Fuse lamps
SQ1	Switch broken rope
SQ2	Switch slack rope
EV1	Hydraulic magnetic valve for Senkvorgang
EV3	Hydraulic magnetic valve for the main vehicle lift
EV2	Hydraulic magnetic valve for auxiliary lift
EV4	Hydraulic magnetic valve for Nivellierer of the auxiliary lifts
KT	Timing relay
M1	230/400V-3kW 3 phase motor
KA1	Relay for photoelectric sensor
PS	photoelektric sensor
Q1	Main switch
S1	Changeover switch main lift / auxiliary lifts
SB2	Key for lifting of the main vehicle lift
SB3	Key to the depression of the main vehicle lift
SB4	Key setting down in the handle
SB5	Key lowering in the danger area
SB7	Key for levelling of the auxiliary lifts
SP	Light switch
T1	230/400V - 18V/24V - Transformer



ps: photoelectric sensor
SQ1:broken cable switch
SQ2:slack cable switch
SQ3:low switch
KM1:contactor
KT: Time Relay
EV4:level of auxiliary
EV1: common descent valve
EV3:Access valve /main
EV2:Access valve /aux
EV13:Air Valve /main
EV12:Air Valve /aux
HZ:buzzer
KA1:photoelectric sensor Relay

S1:selector switch aux/main
SB2:button of ascent
SB3:button of descent
SB4:ratchel
SB5:button of final descent
SB7:level of auxiliary
SB8:button of help

26 - OPTIONALES ZUBEHÖR

Machine lamp

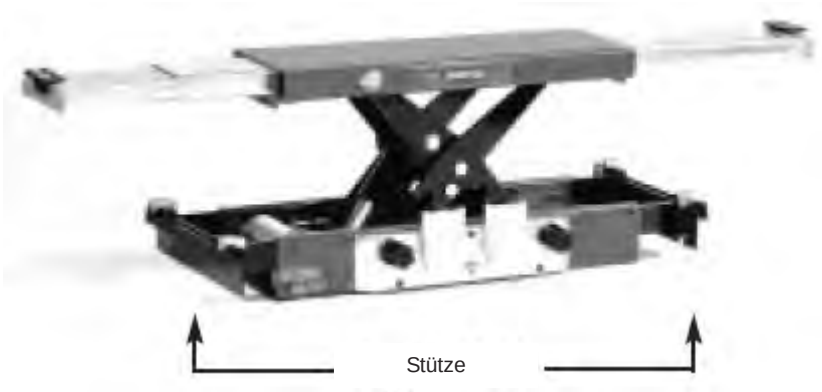
It is possible to attach 4 lamps (230V-36W).

A light switch is in the switch box.

Set from 2 ramp.

These both ramps are instead of both front buffers (see chapter "NAME" to install part 7), if vehicles must leave the vehicle lift forwards.

Axle liftRJ X 26.



This axle lift lift can be necessary to raise the front or rear axis if it is not possible to use the auxiliary lifts. The load-carrying capacity of this scissors siphon amounts to 2600 kg.

CARE

Vehicles may be lifted only in the points which the vehicle manufacturer has intended for this purpose. Only accessories are used by BLITZROTARY.

27 - INSTALLATIONSBERICHT

Hebebühne: SM40LT-47/51 Serien-Nr: Installationsdatum:

Kontrollmessungen, die von dem vom Lieferanten authorisierten Kundendienst in Anwesenheit des Benutzers durchgeführt werden müssen.	Hinweise zum Anwendungskapitel (NU) oder Ersatzteilabschnitt (SPS)	ZU TESTENDES TEIL						Test abgeschlossen (Feld ankreuzen)
		Hubsäule	Steuerknüppel	Haubt-Hebebühne	Radfreiheber	Steuerknüppel/Hubanschluss	Steuerknüppel/Netzanschluss	
1 Unversehrtheit der verschiedenen Bestandteile der Hebebühne	3 (NU)	•	•	•	•	•	•	❑
2 Vorhandensein der ID-Plakette und der Informationshinweise	4 (NU) & SPS	•		•	•			❑
3 Mindestabstand von 80 cm zwischen den fixierten Teilen (Wand, Abtrennung…) und den Fußplatten (auf einer Seite) und dem Elektro-Hydraulikaggregat (auf der anderen Seite).	9(NU)	•	•					❑
4 Netzspannung der Einspeisung	9(NU)						•	❑
5 Abschnitt und Typ der elektrischen Kabel	9(NU)						•	❑
6 Elektronischer Schutz	22 (NU)						•	❑
7 Druck des pneumatischen Luftversorgungsnetzes	9(NU)	•					•	❑
8 Durchmesser und Service-Druck des pneumatischen Zugangsrohrs	10(NU)	•					•	❑
9 Stand und Fluss des Öls von der Schmiervorrichtung des FRL-Aggregats	10 & 22(NU)	•						❑
10 Überprüfen Sie, dass der Pneumatikkreislauf luftdicht ist	10(NU)	•		•	•	•	•	❑
11 Ölstand des Hydraulikaggregats	14(NU)	•						❑
12 Wasserdichtigkeit des Hydraulikkreislaufs	10(NU)	•		•	•	•		❑
13 Funktionsweise der Steuerungen	12(NU)	•						❑
14 Gleichlaufende Aktivierung der Sicherheitsvorrichtungen	22 (NU)	•	•	•	•			❑
15 Aufnahme-Seilzüge befestigen und führen	10(NU)		•	•	•			❑
16 Befestigung und Führung des Hydraulikrohrs, der Pneumatikrohre und der elektrischen Synchronisations-Seilzüge	10(NU)	•		•	•	•	•	❑
17 Prüfen Sie den Abstand zwischen den Kunststoffführungen und den Säulen.	10(NU)	•	•	•				❑
18 Stand der Stützführungen auf den Fangstangenn	22 (NU)				•			❑
19 Stand der Säulen und der Rampen, die an den Aufnahme-Seilzügen eingehängt sind.	22 (NU)	•	•	•				❑
20 Gleichlauf der Radfreiheber	22 (NU)					•		❑
21 Senkvorgang stoppt 150 mm über dem Boden	22 (NU)		•		•			❑
22 Unterbrechung, falls Fehlausrichtung größer als 50 mm	22 (NU)				•	•		❑
23 Akustische Warnsignale	15(NU)		•					❑
24 Manuell Absenken	16(NU)		•		•	•		❑
25 Schrauben und Bolzen festziehen	15 & 22(NU)		•	•	•	•	•	❑
26 Aufnahme-Seilzug der elektrischen Steuerungsvorrichtung	22 (NU)			•				❑
27 Mechanische Vorrichtungen, die im Falle von gerissenen Aufnahme-Seilzügen funktionieren	22 (NU)	•	•	•				❑
28 Befestigung der Zufahrtsrampe und der mobilen Stopper	10(NU)				•			❑
29 Reinigung des Installationsbereiches	14(NU)	•	•	•	•			❑
30 Ein oder mehrere Fahrzeuge anheben	5 & 15(NU)	•	•	•	•	•	•	❑
31 Gebrauchsanleitungen und Präsentation der Sicherheitshinweise		•	•	•	•			❑
32 Aufbewahrung der Aufzeichnungen	3 (NU)	•						❑
Jede Art von Bemerkung wird auf dem Wartungshinweis des Technikers vermerkt - der Benutzer muss diese in das Sicherheitsverzeichnis übertragen								

Authorisierter Lieferant	Kunde
Firmenname, Adresse, Telefon (oder Stempel)	*Firmenname, Adresse, Telefon (oder Stempel)*
Name des Technikers Unterschrift des Technikers	Name des Technikers Unterschrift des Technikers

28 - REGELMASSIGER WARTUNGSBERICHT

Hebebühne: SM40LT-47/51 Serien- Nr: Installationsdatum:

Kontrollmessungen, die von dem vom Lieferanten authorisierten Kundendienst durchgeführt werden müssen	Hinweise zum Anwendungskapitel (NU) oder Ersatzteilabschnitt (SPS)	ZU TESTENDES TEIL						Test abgeschlossen (Feld ankreuzen)				
		Hub-säule	Steuerknüppel	Haupt-Hebebühne	Radfreiheber	Steuerknüppel/Hubanschluss	Steuerknüppel/Netzanschluss	JAHR 1	JAHR 2	JAHR 3	JAHR 4	JAHR 5
1 Zustand der verschiedenen Teile der Hebebühne	3(NU) & SPS	•	•	•	•	•	•					
2 Vorhandensein der ID-Plakette und der Informationshinweise	4 (NU) & SPS	•		•	•							
3 Druck des pneumatischen Zugangsnetzes	9(NU)	•				•						
4 Zustand des FRL-Aggregats	SPS	•										
5 Stand und Fluss des Öls von der Schmiervorrichtung des FRL-Aggregats	10 & 22(NU)	•										
6 Filter des FRL-Aggregats ablassen	14(NU)	•										
7 Luftdichtigkeit des Pneumatikkreislaufes	10(NU)	•		•	•	•	•					
8 Hydrauliköl austauschen (aller 1000 Stunden)	14(NU)	•										
9 Ölstand des Hydraulikaggregats	14(NU)	•										
10 Wasserdichtigkeit des Hydraulikkreislaufes	10(NU)	•		•	•	•						
11 Zustand und Funktionsweise der Steuerungen	15(NU) & SPS	•										
12 Zustand, Befestigung und Aufhängung der Aufnahme-Seilzüge (aller 3 Monate)	14(NU)		•	•	•							
13 Zustand der Fangstangen	14(NU) & SPS	•	•		•							
14 Zustand der Achsen, Ringe und Seilrollen	10(NU) & SPS			•	•							
15 Zustand und Drehung der Räder	10(NU) & SPS				•							
16 Vorhandensein und Zustand der Zufahrtsrampen und mobilen Stopper	22 (NU) & SPS			•								
17 Zustand der Stifte, Federringe und Achsen-Blockierungsschrauben	10(NU) & SPS	•		•	•							
18 Zustand der Gummiklötze	15(NU) & SPS				•							
19 Vorhandensein der Schutzkappen auf den bewegenden Teilen	22(NU) & SPS	•		•								
20 Zustand und gleichlaufende Aktivierung der mechanischen Sicherheitshaken	22 (NU)	•	•	•	•							
21 Zustand, Führung und Befestigung der Hydraulikleitung, Pneumatikleitung und der elektrischen Synchronisations-Seilzüge	10(NU)	•		•	•	•						
22 Stand der Säulen und deren Führungen	22 (NU)	•	•	•								
23 Synchronisierung der Radfreiheber	22 (NU)				•							
24 Allgemeine Reinigung, Ölung und Schmierung	14(NU)	•	•	•	•							
25 Zustand und Funktionsweise der Schiebeplatten	14(NU)			•								
26 Funktionsweise der elektrischen Steuerungsvorrichtungen für die Aufnahme-Seilzüge.	22 (NU)			•								
27 Senkvorgang stoppt bei 150 mm über dem Boden	22 (NU)	•		•								
28 Unterbrechung, falls Fehlausrichtung größer als 50 mm ist	22 (NU)			•	•							
29 Akustische Warnsignale	16(NU)	•										
30 Manuelles Absenken	14 & 16(NU)	•		•	•							
31 Schrauben und Bolzen festziehen	14 (NU) & SPS											
32 Ein oder mehrere Fahrzeuge anheben	5 & 15(NU)	•	•	•	•	•	•					
33 Aufbewahrung der Aufzeichnungen	3 (NU)	•										
Jede Art von Bemerkung wird auf dem Wartungshinweis des Technikers vermerkt - der Benutzer muss diese in das Sicherheitsverzeichnis übertragen												

	JAHR 1	JAHR2	JAHR 3	JAHR 4	JAHR 5
Firmenname des authorisierten Lieferanten					
Name und Unterschrift des Technikers					
Prüfdatum					

29 - WARTUNGSPLAN

Mit der Einhaltung dieses Wartungsplans wird der Benutzer den Richtlinien genügen (Test bei der Installation, Prüfung der Seilzüge aller 3 Monate und allgemeiner Tests aller 12 Monate) Es ist die Aufgabe des Käufers, nachstehende Tabelle auszufüllen und zu aktualisieren.

	Datum	Bedienung	Anmerkungen	
JAHR 1		Installation		
		Regulierungstests		
		Inbetriebnahme		
		Prüfung der		
		Aufnahme-Seilzüge		
		Allgemeiner Check		
JAHR2				
		Prüfung der		
		Aufnahme-Seilzüge		
		Allgemeiner Check		
JAHR 3				
		Prüfung der		
		Aufnahme-Seilzüge		
		Allgemeiner Check		
JAHR 4				
		Prüfung der		
		Aufnahme-Seilzüge		
		Allgemeiner Check		
JAHR 5				
		Prüfung der		
		Aufnahme-Seilzüge		
		Allgemeiner Check		
JAHR 6				
		Prüfung der		
		Aufnahme-Seilzüge		
		Allgemeiner Check		
JAHR 7				
		Prüfung der		
		Aufnahme-Seilzüge		
		Allgemeiner Check		
JAHR 8				
		Prüfung der		
		Aufnahme-Seilzüge		
		Allgemeiner Check		
JAHR 9				
		Prüfung der		
		Aufnahme-Seilzüge		
		Allgemeiner Check		
JAHR 10				
		Prüfung der		
		Aufnahme-Seilzüge		
		Allgemeiner Check		

Wieder-Inbetriebnahme JA/NEIN		Authorisierter Lieferant oder zugelassene Prüfstelle				
		Firmenname	Name des Technikers		Unterschrift	

Trained Operators and Regular Maintenance Ensures
Satisfactory Performance of Your Rotary Lift.

Replacement Parts: See installers package for parts breakdown sheet. Order Genuine Rotary replacement parts from your nearest Authorized Parts Distributor.

Maintenance Assistance: Contact your local Rotary distributor.

Should further assistance be required, contact Rotary Lift, at one of the phone numbers listed below.

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