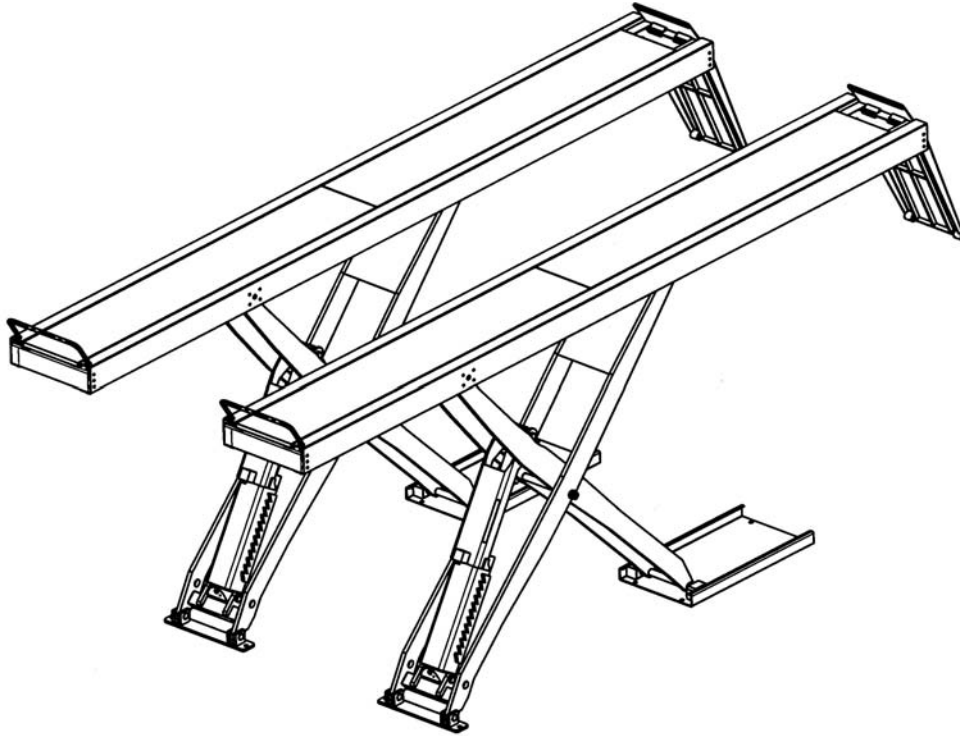


UNI-LIFT 2500

Automotive-Lift date: 04/2006
Manual Datum: 24.04.2006



Operating Instruction and Documentation

Serial-number:

Retailer/Phone



Nussbaum

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Foreword

Products of Nußbaum are results of experience of many years.

The high quality and the superior concept guarantee them reliability, a long lift time and the economic business. To avoid unnecessary damages and dangers, read the operating instruction attentive and observe the contents. Another or the described purpose going out use is not valid when not as agreed. This is valid particularly for climb and go.

Company Nußbaum is not liable for damages arising from this. The user carries the risk a lonely.

For the use belonged:

- to observe all the notice in the operating instruction and
- the following of the inspection and maintenance work and the prescribed tests.
- The instruction for use have to be observed by all persons working with the lift.
- Especially the chapter "Safety/accident Prevention" has to be observed.
- In addition to the safety remarks of the instructions for use the regulations and instructions being valid at the place of operation have to be considered.

Obligations of the operator:

The operator is obliged to allow only those persons complying to the following requirement to work at the unit

- being well acquainted with the basic regulations concerning labour safety and accident prevention and being trained to operate the unit.
- having read and understood the chapter concerning safety and warning instructions and confirmed that by their signature.

Dangers when operating with the lift:

The Nußbaum-Lifts are designed and built according to technical standard and the approved regulations for technical security. Yet, danger for body and life of the operator may turn up when using the lift inexpertly.

The lift must only be operated :

- for its appropriate use
- in unobjectionable condition concerning technical security.

Organising requirements

- The instructions for use are constantly to be kept at the place of operation being at hand at any time.
- In addition to the instructions for use rules pertaining to other regulations i.e. accident prevention and environmental rules are to be observed and directed.
- Safety- and danger alert operation of personal is occasionally and by observing the instructions for use to be controlled.
- As far as required and ordered by regulations personal protective equipment is to be used
- All safety- and danger-hints at the lift are to be observed!
- Spare parts must comply with technical requirements laid down by the manufacturer. This is only warranted with original parts.
Consider time intervals given or fixed in instructions for use for repeated tests/inspections.

Maintenance works, remedy of faults and disposal

- Fixed Adjusting-, maintenance- and inspection works and time intervals including Details for exchange of parts/part components as mentioned in the instructions for use are to be adhered.
These works must only be carried out by expert personal.
- After maintenance- and repair works loose screw connections must always be firmly tightened!

Guarantee and liability

- Our „General conditions of selling and delivering“ are in force.
There will be no guarantee or liability for injuries of persons or things if these injuries are caused by one or by some of the following reasons.
- Inappropriate use of the lift
- Inappropriate installation, initiation, operation and maintenance of the lift.
- Use of the lift while one or several security devices do not work or do not work correctly or are not installed correctly.
- Not to follow the regulations of the operating instruction concerning transport, storing, installation, initiation, operation and maintenance of the lift.
- Changes of the construction of the lift without asking the producer.
- Changes of important adjustments of the lift (e.g. driving elements, power rating, motor speed, etc)
- Wrong or incorrect maintenance.
- Catastrophes, acts of God or external reasons.



**Fill out, undersign and copy this sheet and send the original to the lift manufacturer.
The copy remains in the manual.**

Otto Nußbaum Hebetchnik GmbH & Co. KG
Korker Straße 24
D-77694 Kehl-Bodersweier

Record of installation

The automotive lift UNI-LIFT 2500 with the
serial number:..... was installed on:.....
at the firm:..... at:.....
the safety was checked and the lift was started.

The installation was effected from the operating authority/competent (please delete as applicable).

The safety of the automotive lift was checked from the competent before the initial operation.

The operating authority attest the installation of the automotive lift, the competent attest the correct initial operation.

.....
date name of the operating authority signature of the operating authority

.....
date name of the competent person signature of the competent person

Your customer service:.....

Record of handing over

The automotive lift UNI-LIFT 2500 with the
serial number:..... was installed on:.....
at the firm:..... at:.....
the safety was checked and the lift was started.

The persons below were introduced after the installation of the automotive lift. The introduction was carried out from an erector of the lift-manufacturer or from a franchised dealer (competent person).

.....
date name signature

.....
date name signature

.....
date name signature

.....
date name signature

.....
date name signature

.....
date name signature

.....
date name of competent signature of the competent

Your customer service:.....

1. Introduction

The document "**Operating Instruction and Documentation**" contains important information about installation, operation and maintenance of the lift.

To furnish proof of the **installation of the automotive lift** the form "Record of Installation" must be signed and returned to the manufacturer.

To furnish proof of the singular, regular and extraordinary check this documentation contains forms. The forms should be used to document the checks. They should not be removed from this documentation.

Every **change of the construction** and **displacement** of the automotive lift has to be registered in the "**Master document**" of the lift.

1.1 Installation and check of the automotive lift

Only specialist staff is allowed to do work concerning safety and to do the safety checks of the lift. They are called experts and competent persons in this document.

Experts are persons (for example self-employed engineers, experts) which have received instruction and have experience to check and to test automotive lifts. They know the relevant regulations concerning both labour and accidents prevention.

Competent persons are persons who have acquired adequate knowledge and experience with automotive lifts. They took part in training from the lift-manufacturer (servicing technicians of the manufacturer or dealer are competent)

1.2 Information of Warning

To show danger and to show important information the three symbols below are used. Pay attention to those passages, which are marked with these symbols.



Danger! This sign indicates danger to life. Inexpert handling of the described operation may be dangerous to life.



Caution! This sign cautions against possible damage to the automotive lift or other material defects in case of inexpert handling .



Attention! This sign indicates an important function or another important note.

2. Master document of the automotive lift

2.1 Lift–manufacturer

Otto Nußbaum Hebetchnik GmbH & Co. KG
Korker Straße 24
D-77694 Kehl-Bodersweier

2.2 Application

The automotive lift UNI-LIFT 2500 is a lifting mechanism for lifting motor vehicles with a laden weight of up to 2500 kg. The max. load distribution is 2:3 in or against drive-on direction. The automotive lift is only designed for servicing vehicles. It is not allowed to carry persons with the lift. It is not allowed to climb on the lift or on the vehicle. It's not allowed to install the standard-automotive lift in a hazardous location or washing bays. After changes of the construction after essential maintenance work on carrying parts and after changing the installation place, an expert has to check the lift and to confirm its correctness and security.

2.3 Changes at the construction

Changes at the construction, expert checking, resumption of work
(date, kind of change, signature of the expert)

.....
.....
.....

name, address of the expert

.....
place, date

.....
signature of the expert

2.4 Displacement of the automotive-lift

Displacement of the automotive-lift, expert checking, resumption of work
(date, kind of change, signature of the expert)

.....
.....
.....

name, address of the expert

.....
place, date

.....
signature of the expert

2.5 Page for notice

3. Technical information

3.1 Technical ratings

Capacity	2500 kg
Load distribution	max. 2:3 in or against drive-on direction
Lifting time	approx. 31 sec. with 1200 kg
Lowering time	approx. 26 sec. with 1200 kg
Lifting height	1790 mm
Line Volthage	3 x 400 Volt , 50Hz
Power rating	3 kW
Motor speed	2800 rot./min.
Pump capacity	3 cm ³
Hydraulic pressure	ca. 240 bar with 2500 kg
Pressure relief valve	ca. 255 bar with 2500 kg
Oil tank	approx. 11 Litre
Sound level	≤ 75 dBA
Connection by customer	3~/N+PE, 400V, 50 Hz (standard version) with fuse T16A (Pay attention to the voltage of your state)

3.2 Safety devices

1. Click and pawl arrangement
safety device of the load against unintentional lowering.
2. Overprint valve
Overprint-safety of the hydraulic system.
3. Roll-off safety at the rails
Safety device of the vehicle against falling.
4. Lockable main switch
Safety device against unauthorised using.
5. Stop valves at the hydraulic cylinders
Safety device against lowering and pipe-breaking.
6. Optional: CE-STOP
security equipment against squash.

3.3 Data sheet

power supply by customer: standard Version 3PH, N+PE, 400V, 50Hz fuse 16 A

Slave Side

Master Side

Quality of concrete C20/25 (B25) DIN EN206-1

Operating unit
Bedienlement

subject to alterations!

Nussbaum
TEL. 07262/899-0 FAX 07262/897
FERTIGUNGSTECHNIK UND MECHANIK
77694 KEHL-BODERSWEIER

UNI-LIFT 2500 Capacity: 2500kg	
27.04.06 // M.G.	6433-EINBAU

Alle measures in Millimeter

4. Safety regulations

Observe during working with the automotive-lift the following regulation:
(BGG945: Examination of automotive-lifts; BGR260 Working with automotive-lifts; Regulation for accident prevention (VBG14) .

Especially the following regulations are very important:

- The laden weight of the lifted vehicle mustn't be more than 2500 kg. The max. load sharing is 2:3 in or against the drive-on direction.
- The automotive lift must be sunk completely, before the vehicle is driving, in the provided direction, on the lift.
- During working with the lift the operating instructions must be followed.
- At vehicles with low sub-ground clearance or with optional equipment's is to be tested previously whether damages can appear.
- Only trained personnel over the age of 18 years old are to operate this lift.
- It's not allowed to stay under the lifted or lowered vehicle (except for the operator).
- It's not allowed to transport passengers on the lift or in the vehicle.
- It's not allowed to climb onto the lift or onto a lifted vehicle.
- The automotive lift must be checked from an expert after changes in construction or after repairing carrying pads.
- It's not allowed to start with repair operations at the lift before the main switch is switched off.
- During lifting or lowering the vehicle it must be observed from the operator.
- It's not allowed to install the standard-automotive lift in hazardous location and wash halls.

5. Operating instructions



The Safety Regulations must be observed during working with the automotive lift. Read the safety regulations in chapter 4 carefully before working with the lift!

5.1 Lifting the vehicle

- Drive vehicle over the lift, longitudinal axes on line of the lift.
- Block the vehicle against rolling, put into gear.
- Check the dangerous places of the lift and be sure that there are no objects or people in the immediate area of the lift or on the lift.
- Switch on the control system; main switch on position "1"
- Raise the lift. Push the lever "lifting".
- Raise the lift on working height; push the lever "lifting".
- Do not raise the lift until the limit stop.

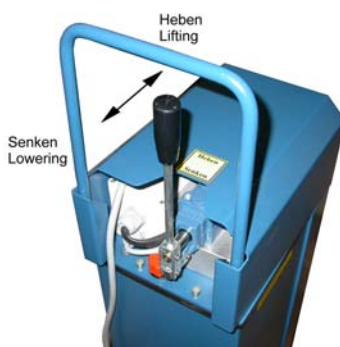


fig: 1 operating unit

5.2 Lowering the vehicle

- Lower the vehicle at the height for working or until the rails reach the lowest point; push the lever "lowering".
- If the lift is on the limit stop. Push the lever **slowly** on position "lowering", otherwise the hose burst check valve can be closed and the lift does not lowered.
- Control the dangerous places of the lift and be sure that there are no objects or people in the immediate area of the lift or on the lift.
- If the lift is in the ratchet - push the lever "lifting" until the ratchets are free and than lower the lift again.
- (Optional): CE-STOP. Before the lift reaches its lowest position, the lift stops automatically. After the lift has stopped, check the danger areas around the lift. Push the lever "lowering" again. A acoustic warning signal will sound as the lift is further lowered. This is to warn against the risk of crushing as the lift is lowered to its lowest (fully collapsed) position.

5.3 Equalisation of the rails

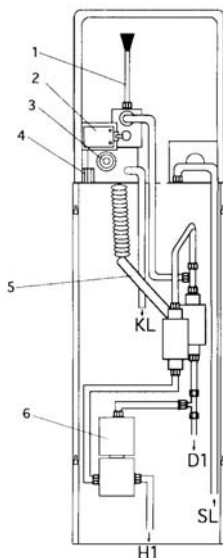
Continuous duty of the lift without reaching the lowest position there might be an un equalisation of the two rails functionally. Normally equalisation of the lift returns after a few minutes (cooling time of hydraulic oil).

In case the un equalisation of the two rails remains you should perform as follows to regain the lift's function:



Equalisation must be performed without vehicle, otherwise the vehicle might fall down.

- Lower the lift in the lowest position.
- Drive off the vehicle from the lift.
- Remove the cover of the operating unit.
- Raise the lift on approx. 400mm;
- Turn equalisation lever 90° upside and hold it in this position.
- Push the lever "lifting or lowering" until the rails have the same height.



Pic. 2 back side of the operating unit

- 1 lever: "lifting"/"lowering"
- 2 switch "motor on"
- 3 pressure control valve
- 4 filling plug
- 5 equalisation lever (ball valve)
- 6 hydraulic pressure switch

SL - tube "return in the tank"

H1 - tube "lifting"

KL - tube "ratchet"

D1 - tube "equalisation"

- Let go off the levers (it goes to start position without help)
- The lift has the normal function mode.

6. Troubleshooting

If the lift does not work properly, the reason for this might be quite simple. Please check the lift for the potential reasons mentioned on the following pages. If the cause of trouble cannot be found, please call the technical service.

Problem: Motor does not start!	
Possible causes: <i>No power supply</i> <i>main switch is not engaged or defective</i> <i>fuse faulty</i> <i>feed line is cut</i> <i>thermal switch in the motor is active</i> <i>Optional: Top-limit switch is faulty</i> <i>Motor faulty</i>	Solution: <i>check the power supply</i> <i>check the main switch</i> <i>check the fuse</i> <i>check and repair it</i> <i>let it cool down</i> <i>Check the top-limit switch</i> <i>Call the service partner</i>

Problem: Motor starts, the lift does not raise!	
Possible causes: <i>The vehicle is too heavy</i> <i>The oil level is too low</i> <i>Emergency lowering screw is not closed</i> <i>Defective hydraulic valve</i> <i>Gear pump is defective</i> <i>Coupling from the motor is faulty</i>	Solution: <i>unload the vehicle</i> <i>refills</i> <i>check the screws</i> <i>Call the service partner</i> <i>Call the service partner</i> <i>Call the service partner</i>

Problem: The automotive-lift does not lowered	
Possible causes: <i>automotive-lift is on a obstacle</i> <i>Hydraulic valve is faulty</i> <i>Main fuse is faulty</i> <i>The safety ratchet is locked</i> <i>The lever or the valve is faulty</i> <i>Optional CE-Stop limit switch is faulty</i>	Solution: <i>(read chapter 6.1)</i> <i>Kundendienst benachrichtigen</i> <i>Sicherungen prüfen lassen</i> <i>Raise the lift and lower again</i> <i>Check the limit switch</i>

6.1 Driving on an obstacle

If the slave side of the lift is running onto an obstacle during lowering and the hydraulic tube has no more pressure, the pressure switch is activated and the lift stops self-instructed. Raise the lift, push lever "lifting" until the obstacle can be removed.

If the master side of the lift is running onto an obstacle during the lowering the lift stops mechanically. Raise the lift, push lever "lifting" until the obstacle can be removed.

6.2 Emergency lowering



A emergency lowering is an intervention into the control of the lift and can be planned only by experienced expert.

The emergency lowering must be carried in this order. Otherwise a malfunction can lead it to damages or lead to danger for body and lives.

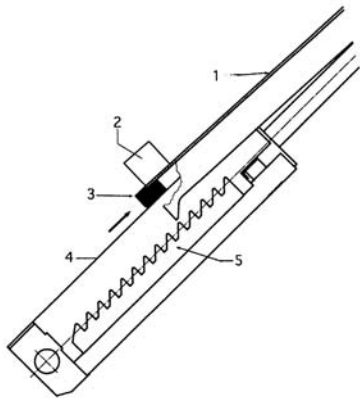


The emergency lowering can only be performed when the ratchets are not engaged.



The emergency lowering must only be performed by persons instructed to use the lift. Please refer to the regulation "Lowering".

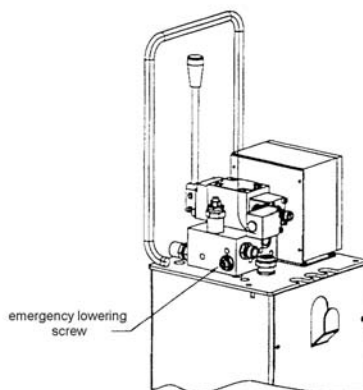
- Raise the safety ratchet with a device and put an object (wood, height 30 mm) between the hydraulic cylinder and the safety ratchet so the teeth of the ratchets can not engaged in the ratchet strip (see Pic). Make these process on both cylinder.



Pic 3:

- 1 safety ratchet
- 2 hydraulic cylinder of the ratchet
- 3 block (height 30 mm)
- 4 hydraulic cylinder
- 5 ratchet strip

- Control the dangerous places of the lift and be sure that there are no objects or people in the immediate area of the lift or on the lift.
- Loose the red lockout.
- Open the emergency lowering screw slowly. The lowering process starts. Observe the emergency lowering. Close the screw with danger .
- Lower the lift in the lowest position.
- After the emergency lowering, the lift must shut down until the defective parts has been changed.



Pic 4: Position of the emergency lowering screw.

7. Inspection and Maintenance



Before conducting maintenance work, preparations must be made to ensure that during maintenance and repair work there is no risk to the safety of people working on or around the lift and also that there is no risk of damage to equipment being used on or around the lift.

To guarantee the utmost availability and to ensure that the lift remains functional, maintenance work contracts are organised between our clients and their local retailers.

A service must be performed at regular intervals of 3 months through the operator in accordance with following service manual. If the lift is in continuous operation or in a dirty environment, the maintenance rate must be increased.

During daily operation the lift must be closely observed to ensure that it is functioning correctly. In the case of malfunction or leakage the technical service must be informed.

7.1 Maintenance plan of the lift

- Before beginning any maintenance work isolate the power supply. Secure the main switch (lock it). Secure the danger area around the automotive lift and secure the lift against unintentional lowering.
- Clean the piston-rod using compressed air.
Grease the piston rods with a high capacity lipid (approx. 5 g of S2 DIN51503 KE2G available from the Renolit Company).
- Check the function of the ramps and the roll-over safety device.
- Check the stripper of the cylinder.
- Clean and lubricate the moving parts of the lift (hinge bolts, sliding pieces, sliding surfaces) grease with a multipurpose lipid (example: Auto Top 2000 LTD. Agip).
- Grease the lubricate nipples with a multipurpose lipid. (example: Auto Top 2000 LTD. Agip).
- Check all the safety devices of the lift.

Execution of the lubrication:

- The bolts of the automotive-lift must be checked by an expert. (We recommend the execution of the examination by a person which during a work training participated.)
After the examination the hinge bolts and bearings are to be lubricated. In the case of strong contamination the bearings are to clean at least outwardly.
- Lubricate the movable parts. (bolts, sliding blocks, sliding surfaces)
The assigned sliding bearings are appropriate for the unlubricated operation. In case of normal operating conditions no lubrication is necessary.
With intensified operating conditions, e.g. with the work with corrosion-aggressive media, with strong dirt and dusty condition, with painting fog, etc. exists the danger of the corrosion and/or the penetration of foreign matter into the bearings. An improved protection of the bearings can be achieved by lubrication.
Therefore we recommend the precautionary lubricating of all hinge bolt bearings.
- Use a lubrication spray with good creep characteristics in case by using hinge bolts without lubrication nipples. Inject the surfaces of the bolts.
Before spraying clean the bearings carefully at least outwardly.

During the lubrication procedure the bearing must be relieved. The relevant safety regulations are to be considered

After the lubrication, raise and lower the automotive-lift several times without load.

It is necessary to lubricate in regular intervals. In the case of usual use of the automotive-lift we recommend monthly lubrication intervals. In the case of strong demand of the automotive-lift the lubrication intervals must be shortened accordingly.

Recommended lubricants:

Grease: each commercial grease e.g..

! Attention: Do not use greases with fixed lubricants (e.g. graphite, Mos2) use.

Lubrication spray: trade-usual lubrication sprays

! Attention: Do not use lubrication spray with silicon parts.

- Check the electrical parts, electric cables and channels for Damage.
- Check all welded joints for cracks on the automotive-lift.
If any cracks are found on the lift cease use immediately. Switch-off and secure the main switch (lock) and call the service partner.
- Check the function and condition of the safety ratchets. Grease the sliding surfaces.
- Damage to external surfaces, must be immediately repaired.
If these repairs are not made immediately, permanent damage to the powder-coated surface may result.
Repair and clean damaged areas with an abrasive paper (grain 120). After this is complete, use a suitable paint (observe the RAL Number).
- Check the zinc surface and repair it with a suitable tool. Use abrasive paper (grain 280).
White rust can result from moisture laying in certain areas for long periods of time. Poor aerating can also result in rust formation.
Rust may result from mechanical damage, wear, aggressive sediments (de-icing salt, liquids) or insufficient cleaning.
Repair and clean these areas with abrasive paper (grain 280).
After this is complete, use a suitable paint (observe the RAL Number).
- Examine the hydraulic lines for leakage (visual check).
Life time of hydraulic hoses:
The use duration of the hose lines should not exceed six years, including a storage time of two years.
- The hydraulic oil has to be changed at least once a year. To change the oil, lower the lift into its lowest position. Empty all tanks and refill with clean oil, approx. 11 litres per hydraulic unit are needed.
Use an ATF-Suffix hydraulic-oil (OEST Company) if the ambient temperature is under 5 degrees centigrade. After filling, the hydraulic oil must be between the upper and lower markings of the oil level gauge.
Remove the old oil according to the appropriate regulations.
- Check that all screws and bolts are correctly torque (turning moments, see the list Pic. 6)

Turning moment for screws

property class 8.8	property class 10.9		
	0,10*	0,15**	0,20***
M8	20	25	30
M10	40	50	60
M12	69	87	105
M16	170	220	260
M20	340	430	520
M24	590	740	890

property class 8.8	property class 10.9		
	0,10*	0,15**	0,20***
M8	30	37	44
M10	59	73	87
M12	100	125	151
M16	250	315	380
M20	490	615	740
M24	840	1050	1250

* sliding friction 0,10 for very good surfaces, lubricated
 ** sliding friction 0,15 for good surfaces, lubricated oder dry
 *** sliding friction 0,20 surface black or phosphatized, dry

Pic 5:

7.2 How often must the lift be cleaned?

A regular and appropriate maintenance practice will aid the preservation of the lift. No guarantees can be given when damage (egg rust or fading colour) is the direct result of poor maintenance and cleaning practice. Regular cleaning of all kinds of dirt is the best protection against wear and the formation of rust and will prolong the life of the lift

- Dirty deposits that can cause rust include:
 - de-icing salt
 - sand, pebble stone, natural soil
 - all types of industrial dust
 - water; also in connection with other environmental influences
 - all types of aggressive deposits
 - constant humidity caused by insufficient ventilation

Obviously this is dependent on the type of work being done with the lift, the degree of cleanliness of the workshop and location of the lift. The degree and amount of dirt is dependent on the season, on the weather conditions and the ventilation of the workshop. During poor conditions it may be necessary to clean the lift once week, but cleaning once a month will suffice.

Clean the lift and the floor with a non-aggressive and non-abrasive detergent. Use a gentle detergent to clean the parts. Use an standard washing-up liquid and lukewarm water.

- Do not use steam jet cleaners.
- Remove all dirt carefully with a sponge or if necessary with a brush.
- Ensure that no washing-up liquid is left on the lift after cleaning.
- Do not use aggressive means for cleaning the workshop floor and the automotive lift.
- A permanent contact with any kind of liquid is not allowed. Do not use high pressure devices for cleaning the lift.

8. Security check

The security check is necessary to guarantee the safety of the lifting during use. It has to be performed in the following cases:

1. Before the initial operation, after the first installation
Use the form “First security check before initiation”
2. In regular intervals after the initial operation, at least annually.
Use the form “Regular security check at least annually”
3. Every time the construction of that particular lift has been changed.
Use the form “Extraordinary security check”



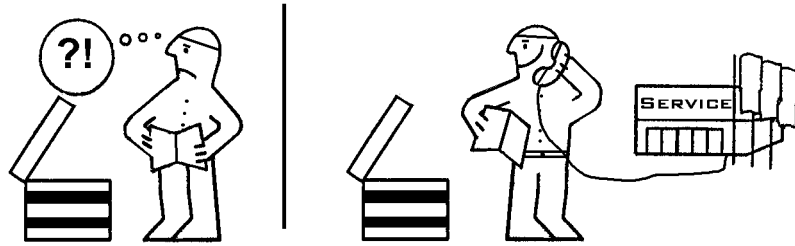
The first and the regular security check must be performed by a competent person. It is recommended to service the lift at this occasion.



After the construction of the lift has been changed (changing the lifting height or capacity for example) and after serious maintenance works (welding on carrying parts) an extraordinary security check must be performed by an expert.

This manual contains form with a schedule for the security checks. Please use the adequate form for the security checks. The form should remain in this manual after they have been filled out. In the following there is a short description about special safety devices.

9. Installation and Initiation



Pic 6:

9.1 Regulations for the installation

- The installation of the lift is performed by trained technicians of the manufacturer or its distribution partner. If the operator can provide trained mechanics, he can install the lift by himself. The installation has to be done according to this regulation.
- The standard lift must not be installed in hazardous locations or washing areas.
- Before installation a sufficient foundation must be proved or constructed. (foundation drawing)
An even installation place has to be provided. The foundations must be based in a frost resistance depth, both outside and indoors, where you must reckon with frost.
- An electrical supply 3~/N+PE, 400 V, 50 Hz has to be provided. The supply line must be protected with T16A (VDE0100 German regulation). The minimum diameter amounts to 2,5 mm².
- All cable ducts have to be equipped with protective coverings to prevent accidents.
- After the installation of the automotive-lift, it is necessary to examine by customer the Protective grounding after IEC regulation (60364-6-61). An insulation resistance examination is also recommended.
- Plug-type connection bay customer: If the plug-type connection is on a height of about 2 meter and only approachable with devices. In this case it is necessary to fasten a separate, lockable main switch in approachable height.

9.2 Erection and doweling of the lift

- Install the lift according to the data sheet and the foundation plan.
- Install the operating unit at its designed place. Connect the power supply.
- Connect the hydraulic. All hoses are marked.
- Fill in the hydraulic oil, approx. 11 litres are needed. A high quality hydraulic oil is recommended, it should be 32 cst. (e.g. HLP 32 LTD. OEST Company) After the fill up, the hydraulic oil must be between the upper and low marking of the oil level gauge.
- Push lever "up" of the lift until the vent screw at the top of master cylinder is accessible.
- Open the vent screw (cylinder screw with copper ring), located at upper side in guide bush of master cylinder. (Do not turn vent screw out completely) until oil comes out of the bore-hole. Shut vent screw immediately and fasten it.
- If the ratchets of the lift engage before oil comes out of the vent screw, shut the vent screw and lift the lift with lever "up" until the ratchet is not engaged any more.
- Afterwards repeat deaerating as described until oil comes out of the ventilating screw.
- Carry out equalisation of the rails as described in chapter "operating instructions"

- Raise the UNI-LIFT to a height of 1500 mm.
- Adjust the lift: first one base plate, than the second base plate. If there is an uneven floor even it with metal sheets. A continuous contact between the floor and the base plate must be guaranteed to avoid hollow spaces. Dowel the lift:

Nußbaum Company demands LIEBIG safety dowels (German dowel manufacturer) or equivalent dowels of other manufacturer but: observe their regulations.

Before doweling check the concrete floor (with quality B25!) if the concrete floor goes to the top edge of the floor. For an existing concrete floor the dowels have to be chosen according to Pic. 7. If floor tiles are on the concrete floor, the dowels have to be chosen according Pic. 8. Its important for the trouble-free working that the base plate are clean and the guides of the sliding block are clean and greased.

Check the adjustment of the base plates and dowel the lift: Bore the holes to fix the dowels through the borings of the base plates. Clean the holes with pressure air. Put in the safety dowels.

- If necessary dowel the operating unit at the floor.
- Tighten the Liebig-dowels with the dynamometric key (M = 80Nm).



Each Liebig dowel must be tightened with the demanded torque. Otherwise the normal and secure function of the lift can not guaranteed. Observe the regulations of the other dowel-manufacturer.

- Raise and lower the lift several times with load. Check the torque of the dowels and check the hydraulic hoses tightness.
- Equalize the lift, if this is necessary.
- Mount the covers: Do not damage the cables.

9.3 Initiation



Before the initiation a security check must be performed. Therefore use form: First security check.

If the lift is installed by a competent person, he will perform this security check. If the operator installs the lift by himself, he has to instruct a competent person to perform the security check.

The competent confirms the faultless function of the lift in the installation record and form for the security check and allows the lift to be used.



Please send the filled installation record to the manufacturer after the installation.

9.4 Changing the installation place

If the place of installation shall be changed, the new place has to be prepared in according to the regulations of the first installation. The changing should be performed in accordance with the following points:

- Raise the lift on approx. 1000 mm.
- Remove the cover of the hydraulic tubes.
- Loose the dowels.
- Lower the lift in the lowest position.

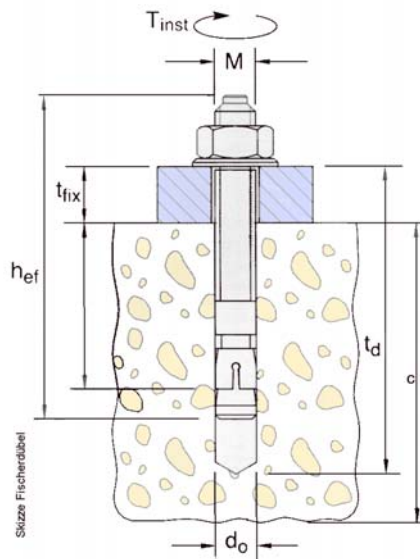
- Loose the plug of the power supply.
- Disconnect electrical wires, hydraulic hoses and air hoses.
- If necessary use blind plugs to close the hoses.
- Disconnect the power supply.
- Transport the lift to its new place.
- Install the lift in accordance with chapter 9 "Installation and Initiation".
- Equalize and deaerate the lift!



Use new dowels, the used dowels can not be used anymore.



A security check must be performed before reinitiation by a competent person. Use form "Regular security check"

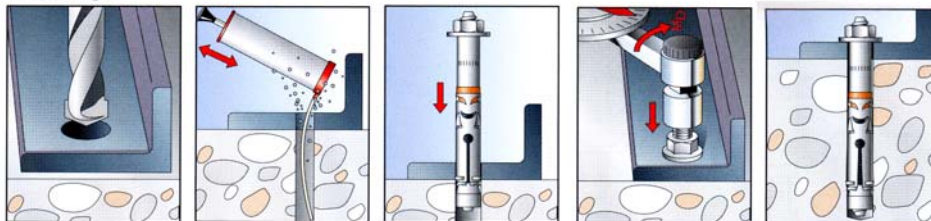


Änderungen vorbehalten!
subject to alterations!
sous réserve des

fischer-Dübel		Jumbo ^b , Sprinter ^b , 4.32H ^a -4.300H ^a , 1.25 SH-1.35SH ^a , 2.30 TLS ^a , 2.35 TS/TSA/TSK ^a , 2.32TSAP ^a , 2.35TSAPH ^a ,	2.25SL ³ , 2.32SL ² -2.35 SL ² , SPL ^b /Power-Lift ^b , 1.20 SE ^b UNI-LIFT 3500 NT/CLT ^d , 2.32TTL ^a , UNI-LIFT 2500 ^d UNI-LIFT 3500 classic ^d	HDL5000 ^a , HDL6500 ^a , 250SE ^f ,
Dübel typ of dowel type de cheville		FH 15/50 B	FH 18 x 100/100 B	FH 24/100 B
Bohrtiefe drilling depth Profondeur de l'alsage	t _d	145	230	255
Mindestverankerungstiefe min.anchorage depth Profondeur minimale d'ancrage	h _{ef}	70	100	125
Betonstärke thickness of concrete Epaisseur du béton	c	siehe den aktuellen Fundamentplan see current foundation-diagram drawing vois le plan de fondation actuel		
Bohrerdurchmesser diameter of bore Diamètre de l'alsage	d _o	15	18	24
Bauteildicke thickness of the lift-piece Epaisseur de la pièce	t _{fix}	0-50	0-100	0-100
Anzugsdrehmoment Nm turning moment moment d'une force	M _D	40	80	120

Stückzahl piece number nombre des pièces	a	4
	b	8
	c	10
	d	12
	e	16
	f	20

Montage



Es können auch gleichwertige Sicherheitsdübel anderer Hersteller (mit Zulassung) unter Beachtung deren Bestimmungen verwendet werden.
It is possible to use equivalent safety-dowels (with license) of other manufacturer but observe their regulations.
Des chevilles des autres marques (autorisées) peuvent aussi être choisies en respectant les directives du fabricant.

Pic. 7: choice of the dowel length without floor pavement or tile surface

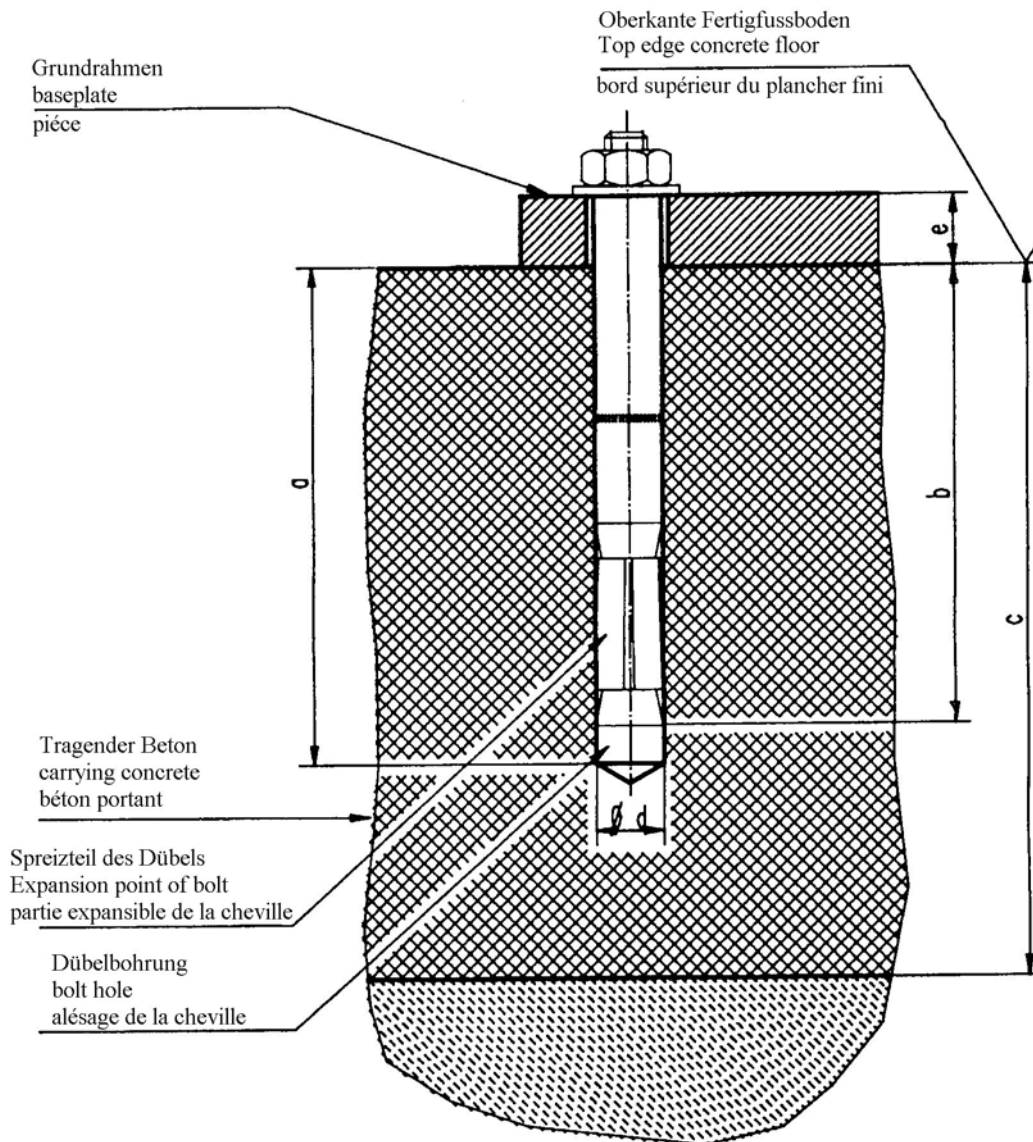


Table to pic. 7

Liebig-dowels

Dowel type		B20/75	B20/100
Drilling depth	a	115	140
Min. anchorage depth	b	85	85
Thickness of concrete	c	180	180
Diameter of bore	d	20	20
Thickness of the lift-pieces	e	0-40	40-65
Number of dowels		12	12
Starting torque		according to dowel manufacturer	

It is possible to use equivalent safety-dowels (with license) of other manufacturer but observe their regulations.

Pic 8: choice of the dowel lengths (without floor pavement or tile surface)

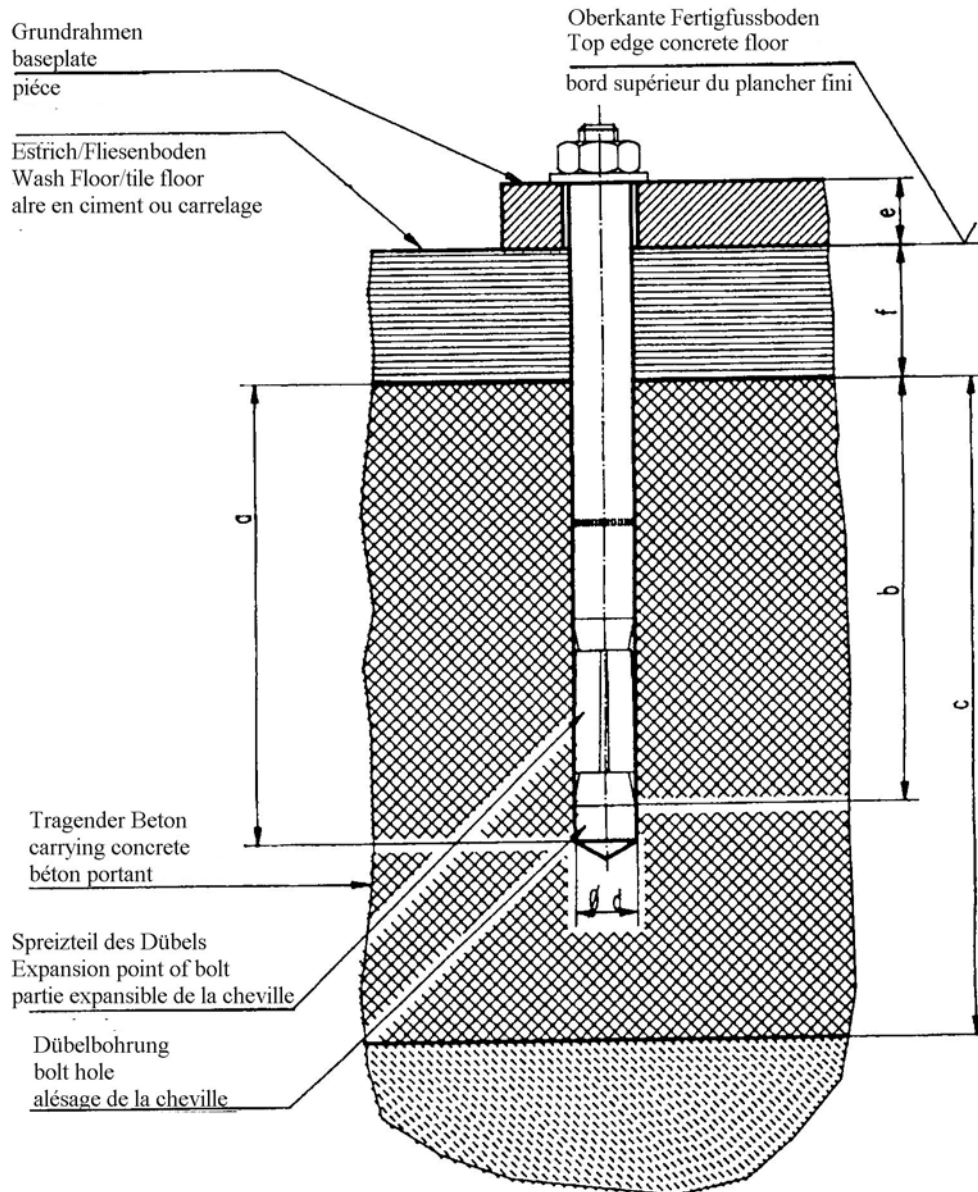


Table to pic. 8

Liebig-dowels

Type of dowels		B20/100	B20/125	B20/135	B20/175
Drilling depth	a	140	165	175	215
Min. anchorage depth	b	85	85	85	85
Thickness of concrete	c	180	180	180	180
Diameter of bore	d	20	20	20	20
Thickness of the lift-piece	e	40-65	65-90	90-100	100-140
Number of dowel		12	12	12	12
Turning moment		according to dowel manufacturer			

It is possible to use equivalent safety-dowels (with license) of other manufacturer but observe their regulations.

9.5 Initiation



Before the initiation a security check must be carried out. Therefore use the form: First security check.

If the lift is installed by a competent person, he or she is to perform the security check. If the operator installs the lift by him or herself, he or she must instruct a competent person to perform the security check.

The competent confirms the faultless function of the lift in the installation record and the form for the security check and authorises the use of the lift.



Please send the completed installation record to the manufacturer after installation.

9.6 Change of lift location

If the place of installation is to be changed, the new place has to be prepared in according to the regulations of the first installation. The change should be performed in accordance with the following points:

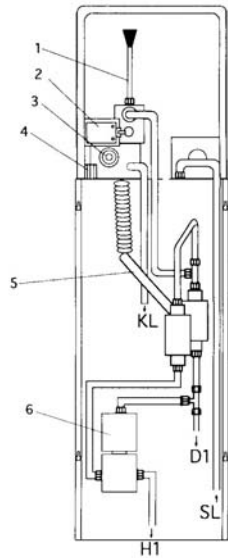
- Raise the lift to a height of about 1000 mm.
- Remove the cover of the tank.
- Remove the lifting arms.
- Lower the lift to its lowest position.
- Remove the oil from tank.
- Remove all electrical cables between the columns.
- Disconnect the power supply.
- Transport the automotive-lift to the its new location
- Install the lift in accordance with chapter 9 "Installation and Initiation".



Use new masonry-bolts, the used bolts can not be used again.



A security check must be performed before reinitiating by a competent person. Use form "Regular security check"



Pic. 9 back side of the operating unit

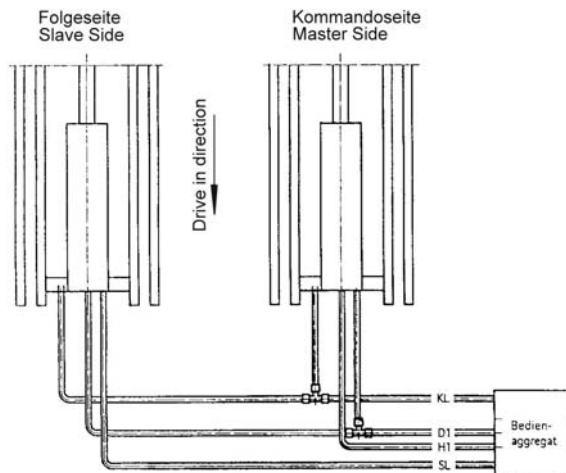
- 1 lever: "lifting"/"lowering"
- 2 switch "motor on"
- 3 pressure control valve
- 4 filling plug
- 5 equalisation lever (ball valve)
- 6 hydraulic pressure switch

SL - tube "return in the tank"

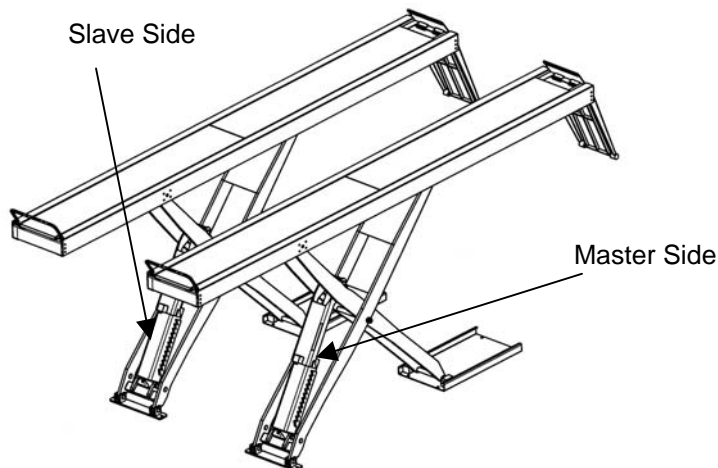
H1 - tube "lifting"

KL - tube "ratchet"

D1 - tube "equalisation" pic 9: connection the hydraulic tubes on the operating unit and the lift



Pic.10 connection of the hydraulic lines



Pic. 11 Position of master – and Slave cylinder

First security check before installation



Filling out and leave in this manual

Serial-number: _____

Kind of check	all right	defect missing	ver-ification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warning designation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function ratchet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function lever "Lifting/Lowering".....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function Ramps.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition automotive lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing of bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition bolts and bearings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction (deformation, cracking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Torque of the dowels and screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fixed seat of the screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition surface piston rod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition coverings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical wires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Level of hydraulic oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function equalisation of the lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function (optional) CE-STOP.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check the welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(mark here applicable, in case of verification mark in addition to the first mark!)

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....
signature of the expert

.....
signature of the operator

If failures must be repaired:


Failures repaired at:

.....

signature of the operator

(Use another form for verification!)

Regular security check and Maintenance

 Filling out and leave in this manual

Serial-number: _____

Kind of check	all right	defect missing	ver-ification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warning designation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function ratchet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function lever "Lifting/Lowering".....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function Ramps.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition automotive lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing of bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition bolts and bearings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction (deformation, cracking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Torque of the dowels and screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fixed seat of the screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition surface piston rod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition coverings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical wires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Level of hydraulic oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function equalisation of the lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function (optional) CE-STOP.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check the welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(mark here applicable, in case of verification mark in addition to the first mark!)

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....
signature of the expert

.....
signature of the operator


If failures must be repaired:

Failures repaired at:

.....
signature of the operator

(Use another form for verification!)

Regular security check and maintenance

 Filling out and leave in this manual

Serial-number: _____

Kind of check	all right	defect missing	ver-ification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function ratchet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function lever "Lifting/Lowering"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function Ramps.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition automotive lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing of bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition bolts and bearings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction (deformation, cracking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Torque of the dowels and screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fixed seat of the screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition surface piston rod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition coverings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical wires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Level of hydraulic oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function equalisation of the lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function (optional) CE-STOP.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check the welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(mark here applicable, in case of verification mark in addition to the first mark!)

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....
signature of the expert

.....
signature of the operator


If failures must be repaired:

Failures repaired at:

.....
signature of the operator

(Use another form for verification!)

Regular security check and maintenance

 Filling out and leave in this manual

Serial-number: _____

Kind of check	all right	defect missing	ver-ification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warning designation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Condition/Function ratchet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function lever "Lifting/Lowering"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function Ramps.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Securing of bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition bolts and bearings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction (deformation, cracking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Torque of the dowels and screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fixed seat of the screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Condition coverings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical wires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Level of hydraulic oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function equalisation of the lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function (optional) CE-STOP.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check the welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(mark here applicable, in case of verification mark in addition to the first mark!)

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

- Initiation not permitted, verification necessary
- Initiation possible, repair failures

until.....

- No failings, Initiation possible

.....
signature of the expert

.....
signature of the operator


If failures must be repaired:

Failures repaired at:

.....
signature of the operator

(Use another form for verification!)

Regular security check and maintenance

 Filling out and leave in this manual

Serial-number: _____

Kind of check	all right	defect missing	ver-ification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Condition/Function ratchet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function lever "Lifting/Lowering"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function Ramps.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Condition bolts and bearings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Condition of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function equalisation of the lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function (optional) CE-STOP.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check the welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(mark here applicable, in case of verification mark in addition to the first mark!)

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....
signature of the expert

.....
signature of the operator


If failures must be repaired:

Failures repaired at:

.....
signature of the operator

(Use another form for verification!)

Regular security check and maintenance

 Filling out and leave in this manual

Serial-number: _____

Kind of check	all right	defect missing	verification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warning designation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function ratchet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function lever "Lifting/Lowering"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function Ramps.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition automotive lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing of bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition bolts and bearings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction (deformation, cracking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Torque of the dowels and screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fixed seat of the screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition surface piston rod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition coverings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical wires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Level of hydraulic oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function equalisation of the lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function (optional) CE-STOP.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check the welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(mark here applicable, in case of verification mark in addition to the first mark!)

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....
signature of the expert

.....
signature of the operator

If failures must be repaired:


Failures repaired at:

.....

signature of the operator

(Use another form for verification!)

Regular security check and maintenance

 Filling out and leave in this manual

Serial-number: _____

Kind of check	all right	defect missing	verification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warning designation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function ratchet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function lever "Lifting/Lowering"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function Ramps.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition automotive lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing of bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition bolts and bearings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction (deformation, cracking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Torque of the dowels and screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fixed seat of the screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition surface piston rod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition coverings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical wires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Level of hydraulic oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function equalisation of the lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function (optional) CE-STOP.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check the welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(mark here applicable, in case of verification mark in addition to the first mark!)

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

- Initiation not permitted, verification necessary
- Initiation possible, repair failures

until.....

- No failings, Initiation possible

.....
signature of the expert

.....
signature of the operator


If failures must be repaired:

Failures repaired at:

.....
signature of the operator

(Use another form for verification!)

Regular security check and maintenance

 Filling out and leave in this manual

Serial-number: _____

Kind of check	all right	defect missing	ver-ification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Condition bolts and bearings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction (deformation, cracking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Torque of the dowels and screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fixed seat of the screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition surface piston rod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition coverings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition electrical wires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Level of hydraulic oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the hydraulic system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition hydraulic hoses.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function test with vehicle.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function equalisation of the lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function (optional) CE-STOP.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check the welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(mark here applicable, in case of verification mark in addition to the first mark!)

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....
signature of the expert

.....
signature of the operator


If failures must be repaired:

Failures repaired at:

.....
signature of the operator

(Use another form for verification!)

Regular security check and maintenance

 Filling out and leave in this manual

Serial-number: _____

Kind of check	all right	defect missing	verification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warning designation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function ratchet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function lever "Lifting/Lowering"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function Ramps.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition automotive lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing of bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Check the welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(mark here applicable, in case of verification mark in addition to the first mark!)

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

- Initiation not permitted, verification necessary
- Initiation possible, repair failures

until.....

- No failings, Initiation possible

.....
signature of the expert

.....
signature of the operator

If failures must be repaired:

Failures repaired at:

.....
signature of the operator

(Use another form for verification!)

Extraordinary security check



Filling out and leave in this manual

Serial-number: _____

Kind of check	all right	defect missing	ver-ification	remark
Type plate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warning designation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Designation lifting/lowering.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed operating instruction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function ratchet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function lever "Lifting/Lowering".....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition operating unit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition/Function Ramps.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition automotive lift.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securing of bolts.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition bolts and bearings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction (deformation, cracking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Torque of the dowels and screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fixed seat of the screws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition surface piston rod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition coverings.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Check the welding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(mark here applicable, in case of verification mark in addition to the first mark!)

Security check carried out:.....

Carried out the company:.....

Name, address of the competent:.....

Result of the Check:

Initiation not permitted, verification necessary

Initiation possible, repair failures

until.....

No failings, Initiation possible

.....
signature of the expert

.....
signature of the operator

If failures must be repaired:

Failures repaired at:

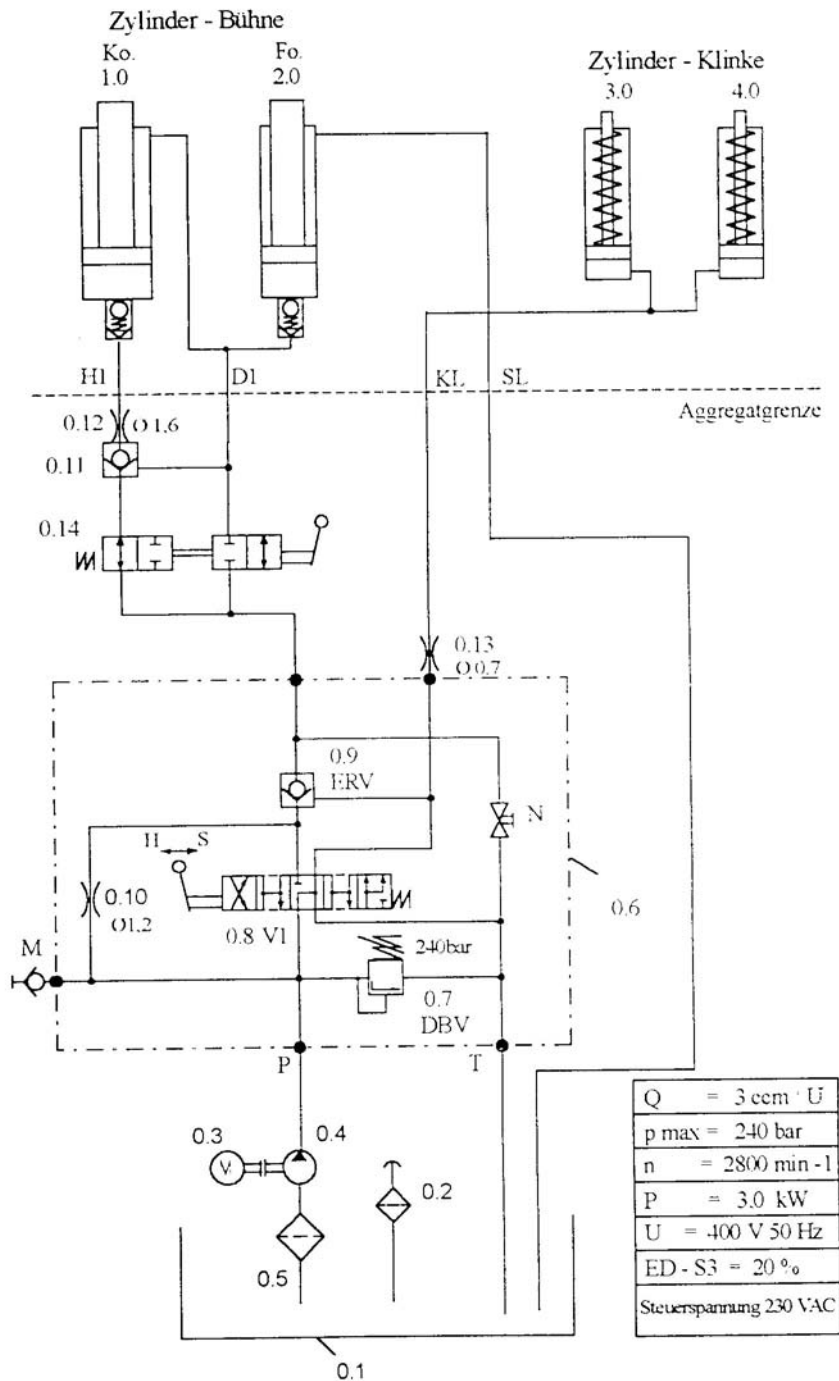
.....
signature of the operator

(Use another form for verification!)

Electrical diagram drawing

0	1	2	3	4	5	6	7	8	9																									
<p>Nussbaum Hebetchnik GmbH & Co. KG Korcker Straße 24 D-77694 Kehl Bodersweier Tel.: +49(0)7853/899-0</p>																																		
<h1 style="margin: 0;">SCHALTPLAN</h1>																																		
<p>OBJEKT : Unilift 3000 ANLAGE : : : KUNDE : : : SCHALTPLANNR: Unilift 3000 07/04/001</p>																																		
<p>1.) Schaltpläne und Schaltunterlagen</p> <p>Schaltpläne werden von uns nach bestem Gewissen angefertigt. Für bestellte Schaltpläne und Schaltunterlagen wird von uns keine Gewähr für die Richtigkeit dieser Unterlagen übernommen. Diese werden von uns nur nach den vom Besteller überlassenen Unterlagen des Herstellers ausgeführt.</p>					<p>3.) Sicherheitsprüfung und Schutzmaßnahmen</p> <p>Der Schaltplan wurde unter Beachtung der anerkannten Regeln der Technik nach VDE0100/1113 sowie des Unfallverhütungsvorschrift VBG (elektrische Anlagen und Anlagen für die Erzeugung, Übertragung, Verteilung und Benutzung der Elektrizität) erstellt.</p> <p>Folgende Prüfungen wurden durchgeführt:</p> <ol style="list-style-type: none"> 1. Spannungsprüfung und/oder Isolationsprüfung des Schaltplans nach VDE0100/5.73 2. Funktionsprüfung und Stückprüfung nach VDE0100/7.73 Par. 12 3. Schutz gegen direktes Berühren nach VDE0100/5.73 Par. 4 4. Schutz gegen indirektes Berühren nach VDE0100/5.73 Par. 5 																													
<p>2.) Funktionsprüfung der Schaltanlagen</p> <p>Schaltpläne sind keine Serienzeuchnisse. Bei der Prüfung des Schaltplans im Merk können Feldgeräte wie Fühler, Ingreteile und Motoren nicht einbezogen werden. Auch bei vorfertigter oder nachträglicher Montage von Bauteilen ist grundsätzlich festzustellen, ob diese im Rahmen unserer Gewährleistung bei der Inbetriebnahme besetztigt.</p> <p>Keine Inbetriebnahme ohne Inbetriebnahmebescheinigung. Bei Inbetriebnahme sind alle vorgeschriebenen Nacharbeiten zu erledigen. Die Inbetriebnahme ist nur nach schriftlicher Genehmigung des Bestellers zulässig. Die Inbetriebnahme ist nur durch geschultes Personal durchzuführen. Kosten für Nachbesserungen durch Dritte können wir nicht anerkennen.</p>					<p>Diese Schaltpläne sind unser geistiges Eigentum. Sie dürfen ohne unsere Genehmigung weder vervielfältigt noch Dritten weitergegeben werden!</p>																													
<p>Erdung nach örtlichen Vorschriften Vor Inbetriebnahme prüfen, ob Motorstrom mit Motorschutzrelais übereinstimmt. Alle Klemmstellen auf Ordnungsmäßige Verbindung und alle Kontaktschrauben auf festen Sitz prüfen. Vor Inbetriebnahme Verdrahtung und Steuerung auf richtige Funktion überprüfen. Keine Inbetriebnahme von unbefugter Seite vornehmen lassen. Änderungen vorbehalten</p>					<p>Diese Pläne sind auf einem CAD-System erstellt worden. Um die Pläne immer auf dem aktuellen Stand zu halten, bitten wir Änderungen nur durch uns vornehmen zu lassen.</p>																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Datum</td> <td style="width: 20%;">BDE</td> <td style="width: 20%;">Nussbaum Hebetchnik GmbH & Co. KG</td> <td style="width: 20%;">Unilift 3000</td> <td style="width: 20%;"></td> </tr> <tr> <td>Bearb.</td> <td>BDE</td> <td>www.nussbaum.de</td> <td></td> <td></td> </tr> <tr> <td>Gepr.</td> <td>29.07.2004</td> <td>+49(0)7853/899-0 Fax: +49(0)7853/899-1</td> <td></td> <td></td> </tr> <tr> <td>Name</td> <td>Korn</td> <td>urspr.</td> <td></td> <td></td> </tr> <tr> <td>Datum</td> <td></td> <td>Ers. d.</td> <td></td> <td></td> </tr> </table>										Datum	BDE	Nussbaum Hebetchnik GmbH & Co. KG	Unilift 3000		Bearb.	BDE	www.nussbaum.de			Gepr.	29.07.2004	+49(0)7853/899-0 Fax: +49(0)7853/899-1			Name	Korn	urspr.			Datum		Ers. d.		
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;"></td> <td style="width: 20%; text-align: center;">-</td> </tr> <tr> <td style="width: 80%;"></td> <td style="width: 20%; text-align: center;">+</td> </tr> <tr> <td style="width: 80%;"></td> <td style="width: 20%; text-align: center;">81.</td> </tr> <tr> <td style="width: 80%;"></td> <td style="width: 20%; text-align: center;">7. Bl.</td> </tr> </table>											-		+		81.		7. Bl.																	
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Hydraulic diagram drawing



0.30 AL - Jumbo I - Aggr. mit NG 06 Dok (22.12.2000)

Hydraulic parts list

- 0.1 oil tank
- 0.2 oil level gauge
- 0.3 motor 400 V; 50 Hz; 3 kW
- 0.4 gear pump 3ccm/revolution
- 0.5 oil filter
- 0.6 hydraulic block
- 0.7 pressure relief valve
- 0.8 4/3 way-valve
- 0.9 holding valve
- 0.10 screen
- 0.11 hydraulic pressure switch
- 0.12 screen
- 0.13 screen
- 0.14 ball valve

- 1.0 cylinder master side
- 2.0 cylinder slave side
- 3.0 cylinder ratchet
- 4.0 cylinder ratchet