

Operating manual | Inspection book

JUMBO LIFT 3200 NT

HYMAX XX 3200 PH

Serial No.:



is a brand of Otto Nußbaum GmbH & Co. KG

ENGLISH

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1 Introduction

Nußbaum products are a result of many years of experience. A high quality standard and superior concept guarantees you reliability, long lifetimes and economical operation. To prevent unnecessary damage and hazards, read this operating manual carefully and always comply with its contents.

! Any other use, or use beyond purpose is considered improper.

! Otto Nußbaum GmbH & Co.KG is not liable for any resulting damage. The operating company alone carries the risk.

Proper use also includes:

- Adherence to all instructions in this operating manual and
- Compliance with inspection and maintenance work and the inspections stipulated.
- The operating manual is to be followed by all personnel working on the system. This is notably with regards to Section 3 "Safety conditions"
- In addition to safety information from the operating manual, comply with rules and regulations at the location of use.
- Proper system Handling

Operating company obligations:

The operating company is obliged to only permit personnel to work on the system who

- Understand the principle regulations about work safety and accident prevention and who have been trained in working with the system.
- Have read the safety section and warning information in this operating manual, have understood it and confirmed learning with a signature.

Hazards in working with the system:

Nußbaum products have been designed and built to state-of-the-art and to recognized safety standards. However, improper use may lead to hazards to life and limb of the user or result in property damage.

The system may only be operated

- For proper intended use
- If it is technically in perfect condition

Organizational measures

- The operating manual is always to be kept ready at the location of use of the system.
- Supplemental to the operating manual, refer to and comply with generally valid legal and other binding regulations for accident prevention and for environmental protection.
- Check occasionally that personnel have an awareness of hazards and safe work in compliance with the operating manual!
- Use personal protective equipment as needed or required by regulations.
- All safety and hazard information on the system is to be kept in a legible condition!
- Replacement parts must meet technical specifications of the manufacturer. This is only guaranteed for original parts.
- Deadlines pre-set or given in the operating manual for repeating tests / inspections must be followed.

Maintenance work, error removal

- Comply with pre-determined setting, maintenance and inspection work and intervals in the operating manual, including details for exchanging parts / part fittings! These activities may only be done by specialists who have participated in a special factory training.

Guarantee and liability

- In principle, our "General sales and supply conditions" apply.

Guarantee and liability claims for personal and property damage are excluded if due to one or more of the following causes:

- Improper use of the system.
- Improper assembly, commissioning, operation and maintenance of the system.
- Operating the system with defective safety devices or improperly attached or non-functional safety and protection devices.
- Non-compliance with information in the operating manual in terms of transport, storage, assembly, commissioning, operation, maintenance and fitting of the system.
- Independent construction changes to the system.
- Independent changes to the system (e.g. drive ratios: power, rotation speed, etc.)
- Improperly done repairs.

- Catastrophic cases due to foreign influences or force majeure.

2 General information

Technical documentation contains important information for safe operation and for retaining functional safety of the system.

- To verify system set up, the set up protocol form is to be signed and sent to the manufacturer.
- Forms are available in this inspection book for use in verifying single, regular and extraordinary safety checks. Use the forms to document inspections and leave the completed forms in the inspection book.
- The system master forms must record changes to the construction and changes to set up location.

2.1 Set up and test the system.


Safety relevant work on the system and safety inspections may only be done by personnel specifically trained to carry it out. They are designated in general and in this documentation as technical experts and specialists.

- Technical experts are people (freelance expert engineers, TÜV specialists) that may inspect and assess due to their education and experience with lift systems. They are knowledgeable in the appropriate work safety and accident prevention regulations.
- Specialists (competent people) are people who have sufficient knowledge and experience with lift systems and have participated in a special factory training by the system manufacturer.

2.2 Hazard information

To become aware of the hazardous points and important information, the following three symbols are used with the descriptive meaning. Pay particular attention to text positions that are labeled by these symbols.

 *Note! Labels information about a key function or points to an important remark!*

 **Caution! identifies a warning of possible system damage or other operating company property damage if the highlighted process is not done properly!**



Danger! identifies a danger to life and limb, if the highlighted process is not done properly there is a mortal danger!

3 Safety regulations

When working with systems comply with legal accident prevention regulations according to BGG 945, inspection of lifts; BGR 500 and operation of systems; VBG 14.

Particular attention is drawn to compliance with the following regulations:

- When operating the system, follow safety regulations and operating instructions in the operating manual.
- The total weight of the accepted load may not exceed 3,200 kg,
- Only personnel aged 18 or over may operate systems independently, they must be trained in system operation and have their work verified by the company. They must be explicitly tasked with operating the system (excerpt from BGR 500), see transfer protocol.
- During lifting or lowering, the work area of the system should be clear of people.
- It is prohibited from moving people with the lift.
- It is prohibited to climb onto the system.
- The lift must be completely lowered before the vehicle is driven on, and it may only be done in the intended direction.
- For vehicles with low floor clearance or custom equipment, check before driving, whether it could be damaged.
- The set up of standard lifts is not permitted in fire and explosion endangered work shops.
- Caution when leaving car engines running in enclosed spaces: danger of poisoning.
- When removing heavy vehicle parts (e.g. motors) the centre of mass of the vehicle changes. In this case secure the vehicle against falling using suitable means.
- Initial access into the lift may only be done after the main switch is off and locked.
- Secure the lift against unauthorized use by switching off the main switch and by using a padlock.
- Always keep the lift and work space clean and dry.

3.1 Safety inspection

The safety inspection is required to guarantee operational safety of the lift system. It is to be done:

1. before first commissioning after setting up the lift system
use the „single safety inspection“ form
2. After first commissioning, check regularly at least once per year.
Use the „regular safety inspection“ form
3. After changes to the lift system construction
Use the „extraordinary safety inspection“ form

! **Single and regular safety inspections must be done by a specialist. It is recommended to do maintenance at the same time.**

ii *After a change in construction (for example changing the load carrying capacity or changing the lifting height) and after significant maintenance on load carrying parts (e.g. welding work), inspection by a technical expert is required (extraordinary safety inspection)*

This inspection book contains forms with a detailed inspection plan for safety inspections. Please use the appropriate form, record the condition of the inspected system and leave the completed form in this inspection book.

4 Assembly and commissioning

4.1 Set up guidelines

- Lift set up is done by trained manufacturer personnel or a contract partner. If the operating company has appropriately trained assemblers, the system can also be set up by them. Set up is to be done according to the assembly instructions.
- A standard system may not be set up in explosion endangered spaces or wash halls.
- Before setting up, verify that there is a sufficient foundation or make it according to the guidelines in the foundation plan. The set up location must be level and even. Foundations in open air and spaces where winter storms or frost are to be expected, must have a foundation to frost depth. The operating company is solely responsible for the set up location.
- Provide an on-site electrical connection of 3 ~/N + PE, 400 V, 50 Hz, fuses with 16 A, slow. The connection point is on the operating unit.

- To protect the electrical cable all cable conduits are to be fitted with cable sleeves or flexible plastic pipes.
- After successful lift installation and before first commissioning, the operating company must have the lift grounding conductors inspected on-site according to IEC regulation (60364-6-61). An insulation resistance test is also recommended.

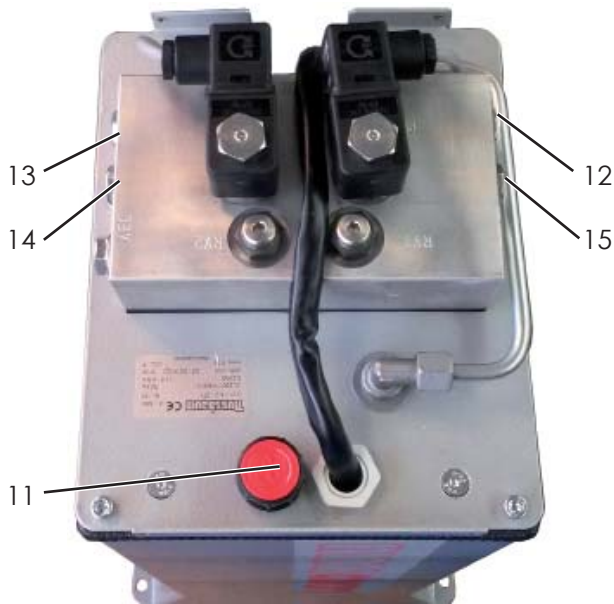
4.2 Setting up the lift

Before setting up the lift, ensure that everything possible is done to prevent accidents due to careless assembly. This includes, above all, the use of safe auxiliary means (e.g. cranes, forklifts and a sufficient number of people), diverse supports and a sufficient barrier to prevent unauthorized access.

- Carefully remove the lift from the wooden crate and check for damage.
- Position the lift according to the data sheet at the desired set up location.
- Set up the unit, connect power supply.

ii *The set up location of the operating unit can be selected from two variants. Either in the drive-in direction at the front right or left.*

- Fill with hydraulic oil, the manufacturer recommends a high value hydraulic oil with a viscosity of 32 cst. The required oil volume is approx. 14 litres. After filling, the oil must be between the marks on the oil dipstick or approx. 2 cm below the oil filling supports (11).



11 Oil filling supports

12 A1

13 A2

14 N1

15 N2

002

- Move the lifting upwards to approx. 1,500 mm
- Check the alignment of the base plates again and anchor the lift. Holes for floor anchoring are to be placed through the holes in the base plates.

Clean the bore holes by blowing them out with air. Insert safety anchors into the holes.

The manufacturer recommends using approved safety anchors and to follow anchor manufacturer's instructions.

Before anchoring the lift, check whether the concrete is of quality C20/25 up to the finishing level of the completed floor. In this case, take the anchor length from the anchor manufacturer's data sheet. If there is a floor covering (tiles, screed) on the weight bearing concrete, the thickness of this covering must be determined.

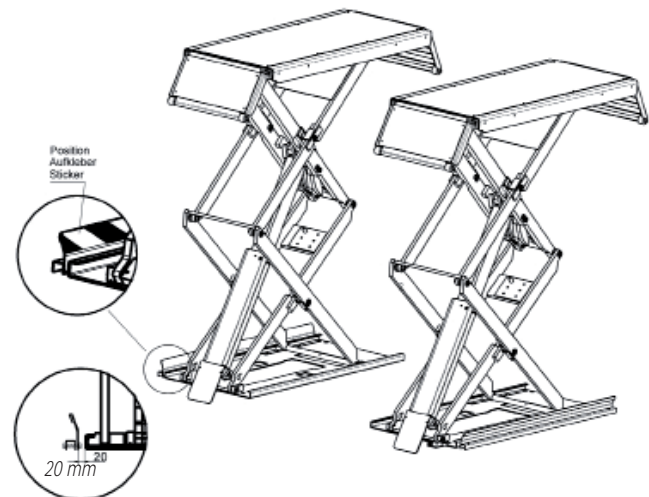
- Anchor the unit to the floor.
- Align the lift

To prevent hollow spaces, correct any unevenness in the floor by putting shims under the base frame (e.g thin metal strips). Use suitable supports to ensure continuous contact between the floor and base frame.

- Tighten safety anchors with torques recommended by the manufacturer.

! Each anchor must be tightened to the required torque. Safe operation of the lift is not guaranteed with a lower torque. Follow the instructions of the anchor manufacturer.

- Move the lift upwards and downwards several times, then check the anchors with the torque wrench and tighten if required. Check the hydraulic lines for leak-tightness.
- Balance the lift again if required.
- Mount all hose covers.
- Anchor the foot bumpers included beside the lift on the floor. For this, lower the lift to the lowest position. Position the foot bumpers and permanently anchor them. Distance between the drive in rails and the foot bumpers approx. 20 mm (foot bumpers may not touch the drive in rails).



Position of the foot bumpers

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4.3 Fill and vent the hydraulic systems

- The lift is factory pre-installed; meaning the hoses and pipe connections are properly assigned.

Finally, check the power connection, check for correct hydraulic oil in the proper volume and leak-tightness of the connection when setting up the lift.

If the hose connections are still open, e.g. for the purposes of hose extension, then air may be entrapped resulting in start up problems or challenges with smooth running.

Check and ensure proper allocation of hose connections.

! This procedure must always be completely carried out. This means, first fill and then vent.

Correct method of filling and balancing (lift with HyperFlow system):

- Close the emergency discharge screws „N1“ (14) and „N2“ (15).
- Push the ↑ „Lift“ button to move the lift upwards without a load to the maximum height.
- Continue holding the ↑ „Lift“ button. This starts the „Overflow procedure“. Oil flows from the hydraulic pump through the command and downstream cylinders and back into the tank.
- After releasing the ↑ „Lift“ button, the lift lowers a few millimetres and closes the overflow openings.
- The system is now vented and smooth operation can happen.
- The lift now has its normal operating function.

4.4 Commissioning

i Before commissioning, a single safety inspection must be done (use the „single safety inspection“ form)

If the lift set up is done by a specialist (factory trained assembler) then he can also do the safety inspection. If the set up is done by the operating company then a specialist must be tasked with the safety inspection. The specialist confirms seamless operation of the lift on the set up protocol for single safety inspection and releases the lift for use.

i After commissioning, the set up protocol must be completed and sent to the manufacturer.

4.5 Changing the assembly location

To change the assembly location the pre-conditions must be met according to the assembly guidelines. The location change is to be done according to the following sequence.

- Move the lifting stage upwards to approx. 1,000 mm
- Loosen and remove all hose covers.
- Loosen base plate anchors.
- Lower the lift to the lowest position.
- Disconnect power.
- If necessary, disconnect the hydraulic lines on the operating unit only, and seal them off with blind stoppers.

- If necessary, suction off the hydraulic oil.
- Transport the lift with the unit to the new set up location.
- Assemble the lift according to the procedure during assembly and anchoring before first commissioning.



Use new anchors. The old anchors are no longer fit for purpose!

i Before re-commissioning, a safety inspection must be done by a specialist (use the regular safety inspection form)

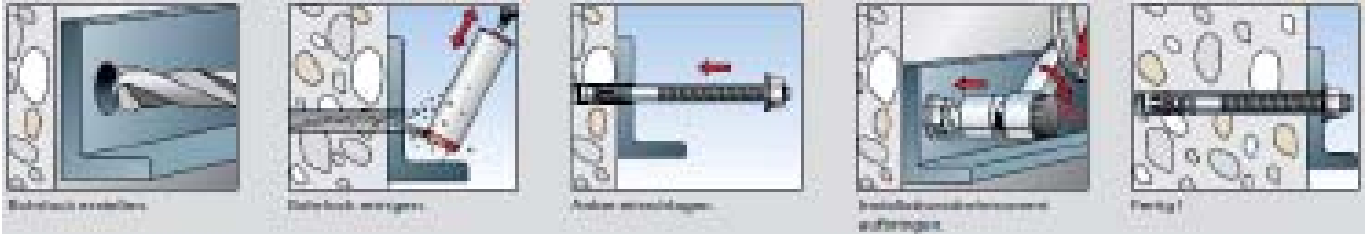
4.6 Selecting the anchors

Anchor type	without floor covering (screed/tiles)	with floor covering (screed/tiles)
Heavy duty anchor	BM 10-15/70/40	
Liebig/Strongtie	FH 15/50 B	Anchor length depends on the floor covering
Fischer	HSL-3-G M10/40	
Hilti		
Injection anchor		
MKT	VMZ-A 75 M12-25/145	
Hilti	HIT-HY 200 with HIT-Z M12	
Fischer	Highbond FHB II-A S	
	M12x75/25	

i Similar value anchors and other known brands of anchor manufacturers can be used when considering the conditions.

4.7 Assembly

 Follow the instructions enclosed in the anchor packaging.



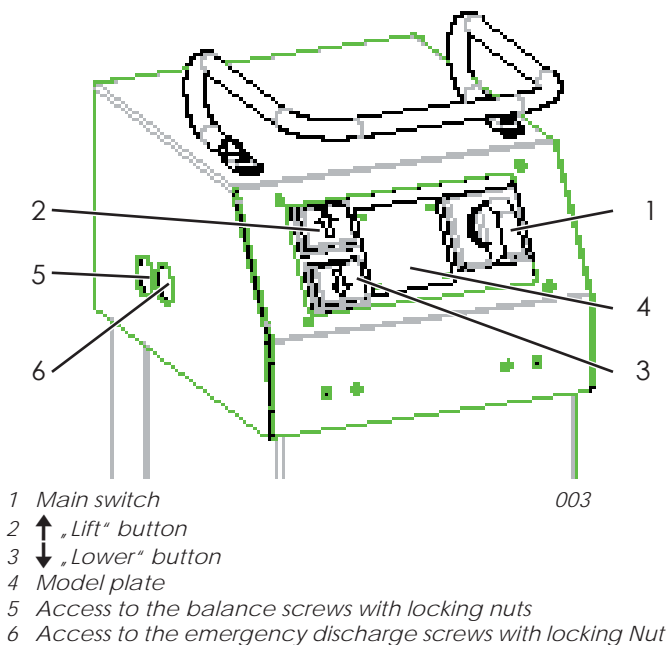
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5 Operating manual



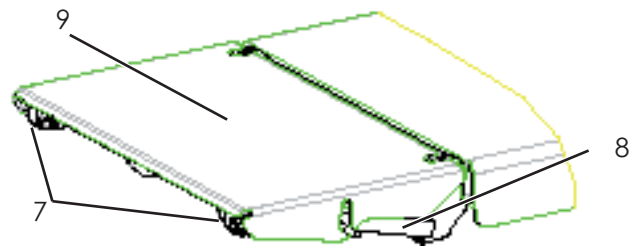
When handling the system, it must absolutely comply with safety regulations. Carefully read the safety regulations in Section 3 before first operation!

5.1 Operating element



5.2 Lifting the vehicle


- Drive the vehicle over the drive rails lengthwise and cross-wise in the centre.
- When driving onto the lift, position the ramps so that the rollers (7) of the ramps (9) are on the ground.



- 7 Rollers
- 8 Supports
- 9 Ramps

Otherwise the supports (8) and ramps (9) can be damaged.

- Secure the vehicle against rolling. Apply the handbrake, put into gear.
- Position polymer overlays below the receiving points approved by the vehicle manufacturer.

 If required, use the ramps for safe acceptance of the vehicle. If the wheel base is too short, fold the ramps underneath.



To receive the vehicle, the polymer overlays cannot be placed on edge otherwise there is a danger of the car falling.

- Inspect the hazardous area.
No person or object may stand in the working area of the lift, or on the lift.
- Switch on controls. Turn the main switch (1) to position „1“ (see figure 003).

- Lift the vehicle. Push the ↑ „Lift“ (2) button.
- If the wheels are not blocked, interrupt the lifting process and check for proper seating of the polymer overlays.
- Raise the vehicle to the desired working height. Push the ↑ „Lift“ (2) button.

5.3 Lowering the vehicle

- Inspect the hazardous area.

No person or object may stand in the working area of the lift, or on the lift.

! The vehicles cannot be lowered into the lowest position without wheels. Otherwise the lift cannot raise the load using its own force. The vehicle could be damaged.

- Lower the vehicle to the desired working height or completely lower it. Push the ↓ „Lower“ (3) button (see figure 003).
- The entire lowering process must be observed.
- If the lift is in the detectable lowest position, remove the polymer overlays and drive the vehicle from the lift.

5.4 Balance the drive rails

See „Section 4.3 filling and venting the hydraulic system“.

6 Maintenance and care of the system



Before maintenance, do all preparati-on work so there is no danger to life or limb or object damage during maintenance and repair work.

Value is placed on long lifetimes and safety in the development and production of Nussbaum products. To guarantee the safety of the operator, product reliability, low running costs, keep the warranty and also the long-lifetime of the product, proper set up and operation is just as important as regular maintenance and sufficient care.

Our platforms fulfil or exceed all safety standards of the countries we supply to. For example, European regulations require a service by qualified experts every 12 months of work of the platform.

To guarantee the largest possible availability and functional capacity of the lift system, ensure the list of any cleaning, care and maintenance work is done.

The lift system is to be serviced at regular intervals according to the following plan. For intensive operation and higher degree of contamination shorten the service interval.

The complete function of the lift system is to be observed during daily use. Customer service must be informed of any malfunctions or leaks.

To simplify maintenance work, follow instructions on the maintenance sticker that is found somewhere on the unit, depending on the lift design.

6.1 System maintenance plan



Before beginning service, disconnect from power. The system is to be secured against unintentional lowering and unauthorized access.

6.1.1 As required or visible damage

- Check the polymer overlays and replace if required.

6.1.2 Maintenance 1 x per year

- Check condition of the model plate, load capacity and sticker. Exchange them if damaged or illegible.
- Free the piston rod of the lifting cylinder of sand and dirt.
- Check the wiper for damage.
- Moving parts such as joint bolts and DU bearings, sliding pieces, sliding surfaces and rollers are to be cleaned and checked for wear, exchange if required.
- Lubricate all lubrication nipples with an acid-free multi-purpose grease. Do not over-lubricate.
- All weld seams must have a visual inspection. Stop the system and contact the manufacturer if there are cracks or breaks in weld seams.

- Check the powder coating and improve if required.

Damage by external influences is to be treated immediately after detection. If these points are not treated, infiltration of deposits of all kinds can cause wide-ranging and permanent damage.

These points are to be lightly sanded (120 grit), cleaned and degreased. Afterwards, rework with a suitable touch up paint (note the RAL No.).

- Check the condition and function of the driving ramp.
- Check the condition of the cement floor.
- Check the torque of the fastening anchor. Also see the assembly protocol.
- The condition and function of the load suspension means are to be checked.
- Check the torque of the fastening screws.

Torque (Nm) for shaft screws

Fastening class 8.8

	0,08*	0,12**	0,14***
M8	17,9	23,1	25,3
M10	36	46	51
M12	61	80	87
M16	147	194	214
M20	297	391	430
M24	512	675	743

Fastening class 10.9

	0,08*	0,12**	0,14***
M8	26,2	34	37,2
M10	53	68	75
M12	90	117	128
M16	216	285	314
M20	423	557	615
M24	730	960	1060

* sliding friction 0,8 MoS2 lubricated
 ** sliding friction 0,12 lightly oiled
 *** sliding friction 0,14 Screw secured with microencapsulated plastic

- Check electrical components for function. Replace any damaged components.

Optional CE stop switch and signalling unit

Push button, main switch

Electrical cable

During assembly and maintenance always check the condition of electrical lines. All cables and lines must be secured so they cannot be

crushed, kinked or contact any moving assembly.

- Check hydraulic oil.

The oil is used if it has a milky colour or if the hydraulic oil smells unpleasantly.

- Check the hydraulic lines and screws for leaks.

Hose lines are to be replaced:

- for damage to the outer coating up to the insert (chafe marks, cuts, cracks)
- for brittleness of the outer coating (crack formation), deformation of the natural shape in the depressurized and in pressurized states.
- if leaking
- for damage or deformation of the mounting fixture
- if the mounting fixture has meandered
- if the lifetime has been exceeded

Repair of the hose line using the implemented hose / mounting fixture is not permitted!

Extending the replacement intervals given in the guideline is possible if the inspection for safe-work condition is done in adjusted, shortened time frames, if required and by competent personnel.

If there is an extension of the replacement interval, no situation may occur which could result in injury of employees or other personnel.

- Check the condition and function of all available safety devices.
- Check the foot bumper for condition and function. Exchange if damaged

6.1.3 Maintenance every 2 years

- According to manufacturer details, the hydraulic oil should be changed every two years in normal operations. Various environmental influences e.g. location, temperature swings, intensive operation etc, can have an influence on the quality of the hydraulic oil. For this reason, the oil must be checked during annual safety inspections and maintenance.

The oil is used if it has a milky colour or if the hydraulic oil smells unpleasantly.

To change oil, lower the lift is to its lowest position then suction the oil out of the oil container and replace the contents.

The manufacturer recommends a high-quality clean hydraulic oil. The required oil volume and type is to be taken from the technical data. After filling, the hydraulic oil must be between the upper and lower marking on the oil dipstick, or approx. 2 cm below the oil filling opening.

Dispose of the old oil according to regulations to the intended location (district offices, environmental protection office or commercial regulatory office has the obligation to disclose about disposal points).

6.1.4 Maintenance every 6 years

- Exchange the protective and hydraulic hoses.

Excerpt from BGR 237

Specifications for the hydraulic hose lines:

- **Normal specification:**

6 years including 2 years storage time.

- **Increased demands** e.g. due to increased usage times, e.g. multi-shift operation, short cycle times and pressure impulses and large external and internal (due to medium) influences which significantly reduce the lifetime of the hose lines:

2 year operation duration

6.2 Cleaning and care of the system

A regular and expert clean helps retain the value of the system.

Additionally, it can also be a pre-requisite for the preservation of guarantee claims for any eventual corrosion damage.

The best protection for the system is regular removal of contaminants of any kind.

This includes above all:

- de-icing salt
- sand, pebbles, earth
- industrial dust of all types
- Water, also in connection with other environmental influences
- Aggressive deposits of all types
- Permanent humidity due to insufficient ventilation

! As a rule: The longer road dust, salt, and other aggressive deposits remain caked onto the system, the more damage they will have.

The frequency of system cleaning depends, among other things on the frequency of use, of system handling, of workshop cleanliness, and the location of the system.

Furthermore, the degree of contamination depends on the time of year, the weather conditions and workshop ventilation.

Under adverse circumstances, weekly system cleaning might be required, however a monthly cleaning may be sufficient.

- For cleaning, do not use high pressure washers (e.g. steam cleaners)

Do not use any aggressive and abrasive materials. Instead, use mild cleaners, e.g. a commercially available detergent and lukewarm water.

- Carefully remove all contamination with a sponge, or if required with a brush.

Make sure that there is no residue of the cleaner on the system. These could lead to an increased danger of slipping when moisture is present. So rinse thoroughly with clean water until all residue has been removed.

- Be sure that electric parts of the system, cables, hoses, etc. do not come into contact with water.
- Dry the system with a cloth and spray it with a spray wax or oil.

ii *To encourage/accelerate the airing and/or drying of foundation pits and lift parts, whenever the load receiving fixtures are not in use for a longer period of time, including overnight, lift them out of the foundation pit.*

7 Behavior in cases of error

Defective operational readiness of the system may be due to a simple error. Check the system for the listed sources of error.

If the error cannot be removed after an inspection to the named causes, then inform customer service or your dealer.



Independent repair work on safety devices of the lift and checking the electrical system may only be done by specialists.

Problem: Motor does not start	
Possible causes:	Remedy:
No power supply	Check the power supply
The main switch (1) is not switched on, or is defective	Check the main switch (1).
Defective fuse	Have fuses checked
The ↑ "Lift" (2) button is defective	Inform customer service
Motor has overheated	Let the water cool. Cooling time depends on the ambient temperature.
Motor defective	Inform customer service

Problem: Motor starts, load is not lifted	
Possible causes:	Remedy:
Load is too heavy	Unload the lift
Hydraulic oil filling level is too low	Refill hydraulic oil
Emergency discharge fixture is not closed	Check emergency discharge fixture
Pressure line leaking	Inform customer service
Hydraulic pump defective	Inform customer service
The coupling between the motor and pump is defective	Inform customer service
Defective cylinder	Inform customer service
Pressure relief valve is defective	Inform customer service

Problem: The lift cannot be lowered	
Possible causes:	Remedy:
Lifting table is sitting on an obstacle	See 7.1 Moving onto an obstacle
Hydraulic valve defective	Inform customer service
The ↑ "Lower" (3) button is defective	Inform customer service

7.1 Moving onto an obstacle

If the system moves onto an obstacle during lowering, then it remains in position due to the mechanical resistance. In this case, move the lift upwards by pushing the ↑ "Lift" (2) button on the operating panel until the obstacle can be removed. Afterwards the lift is in a normal work condition and can continue to be operated as described in the operating manual.

7.2 Emergency discharge during blackout



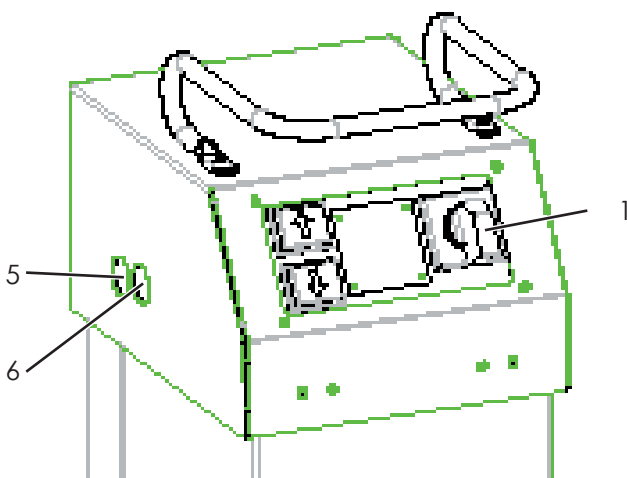
An emergency discharge is an access into the system controls and may only be done by experienced specialists.

The emergency discharge must be done in the following described sequence, otherwise it can lead to damage and hazard to life and limb,



Any kind of external leakage is not permitted and must immediately taken care of. This is absolutely necessary especially before an emergency discharge.

Reason which make an emergency discharge necessary are for example, electrical blackout, for errors in the lowering valves, etc.



1 Main switch 003
5 Access to the balance screws with locking nuts
6 Access to the emergency discharge screws with locking nut

- Turn off the main switch (1) and secure against unauthorized switch on. Disconnect power.

! Inspect the hazardous area. No person or object may stand in the working area of the lift, or on the lift.

- Remove the covers for the emergency discharge screw accesses (6) on both sides.
- Loosen the locking screws (SW17) of the emergency discharge screws "N1" (14) and "N2" (15).
- Initially, using an Allen key (SW5), slowly unscrew the emergency screw N1 by 1/4 turn.

! Caution: During this process a drive on rail of the lift will lower somewhat (approx. 5 cm). Lowering can be interrupted by closing the emergency discharge screw.

- Subsequently unscrew the opposite emergency discharge screw slowly a little.

! The lowering process starts immediately. The speed can be influenced by the degree the emergency discharge screw is opened.

- Lower the lift to the lowest position.
- The entire lowering process must be continuously observed.
- Afterwards, remove the polymer overlays and drive the vehicle from the lift.
- After finishing the emergency discharge, close and lock the emergency discharge screws N1 and N2 again.
- If required, defective parts must first be replaced before the lift is put into operation again. For this, inform customer service.



Turn the main switch off and secure against restart. Shutdown the lift until all defective parts have been exchanged.

! After exchange of defective parts a "Vent of the hydraulic system" must be done.

8 Technical information

8.1 Technical data

Weight	920 kg
System load capacity	3,200 kg
Load distribution	Max. 3:2 or 2:3 in or against the drive- in direction (Consider the centre of mass of the vehicle)
Effective lifting range of the system	Approx. 2,000 mm
System lift time	Approx. 35 s with 3,200 kg load
System lowering time	Approx. 30 s with 3,200 kg load
Operating pressure	Approx. 270 bars
Operating voltage	3 x 400 Volt , 50 Hz
Motor capacity	3 kW
Motor speed	3000 rpm
Oil pump conveying power	3 cm ³
Pressure relief valve	Approx. 300 bars
Filling volume oil container	Approx. 14 litres
Noise level	≤ 70 dB(A)
on-site connection	3~/N+PE, 400 V, 50 Hz with 16 A fuses, slow, according to VDE regulations

8.2 Safety devices

- **Over-pressure valve**

Hydraulic system fuse against over-pressure.

- **Check valve**

Secure the vehicle against unauthorized lowering of the load suspension means

- **Two independent cylinder systems (each with a command, follow system)**

Secure against unauthorized lowering of the lift.

- **Main switch with locking device**

Fuse to prevent unauthorized use.

- **Dead man controls**

When the buttons ↑ "Lift" (2) or ↓ "Lower" (3) are released, the corresponding movement stops

- **Foot bumper on the lift (optional)**

Guard against crushing in the foot area.

- **CE stop (optional)**

Guard against crushing in the foot area.

9 System master sheet

9.1 Manufacturer

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

9.2 Purpose

The JUMBO LIFT 3200 NT - HYMAX 3200 PH lift is a lift for cars up to a total weight of 3,200 kg in normal work shop operations and a maximum load distribution of 3:2 or 2:3 in the drive-in direction or against the drive-in direction.

Additionally, there is a distinction between cars operated with front or rear drive.

Set up of the standard lift in explosion endangered workshops or humid work shops (e.g. outside and washing halls) is prohibited. After construction and significant maintenance changes on load carrying parts the lift must be inspected afterwards by a specialist who approves the changes.

Operation of the lift is done by an operating unit that is located immediately next to the lift.

9.3 Changes to the design / construction

Inspections by a technical expert are required before recommissioning (date, type of change, technical expert signature).

.....

.....
Name, address of technical expert

.....
Location, date

.....
Technical expert signature

9.4 Changing the assembly location

Inspections by a technical expert are required before recommissioning (date, type of change, specialist signature).

.....

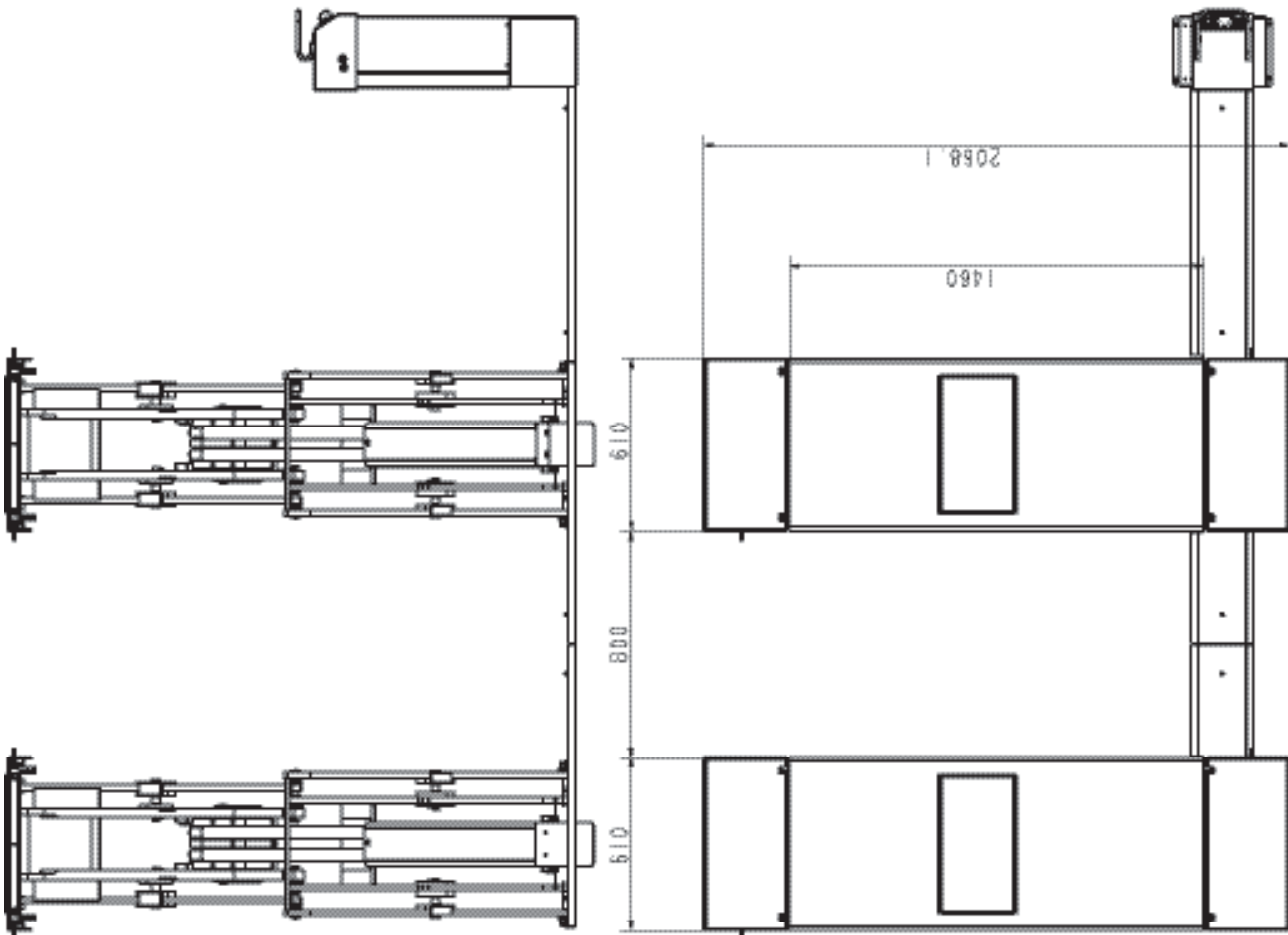
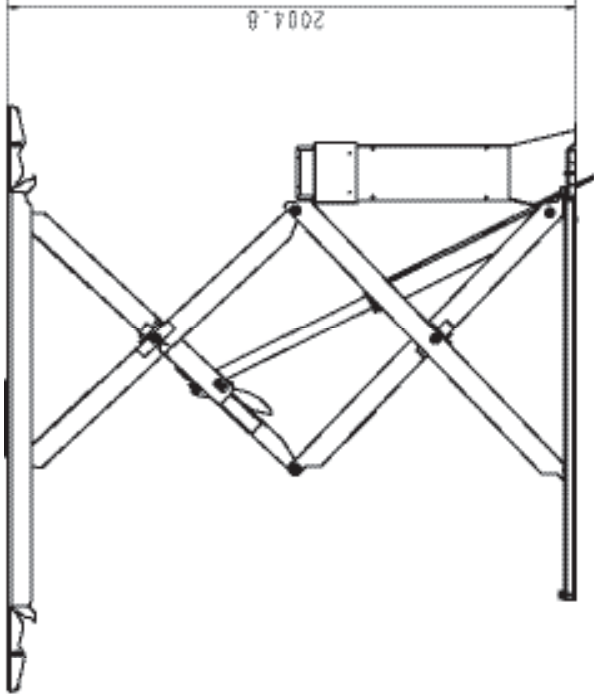
.....
Name, address of technical expert

.....
Location, date

.....
Technical expert signature

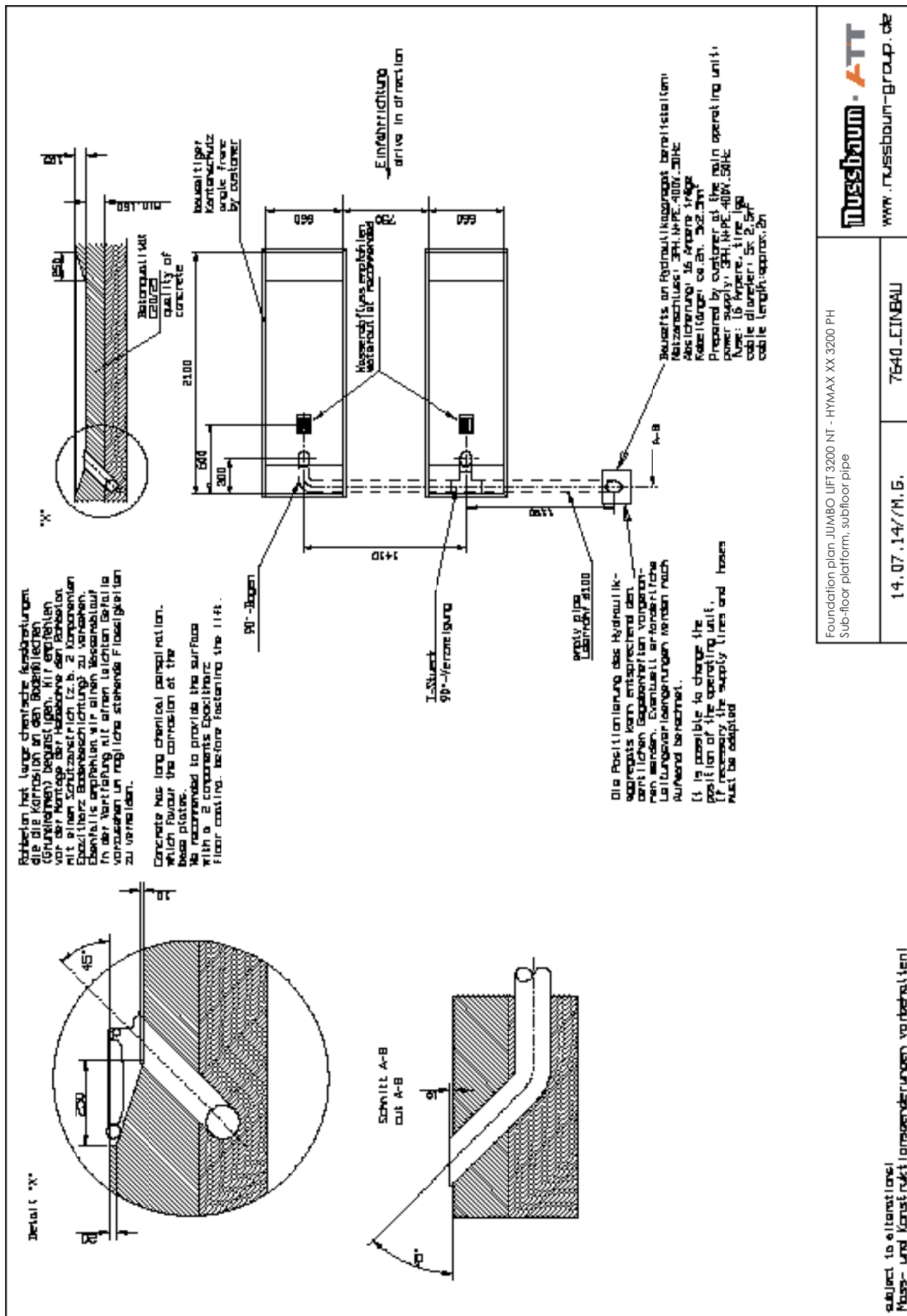
10 Data sheet

JUMBO LIFT 3200 NT - HYMAX XX 3200 PH

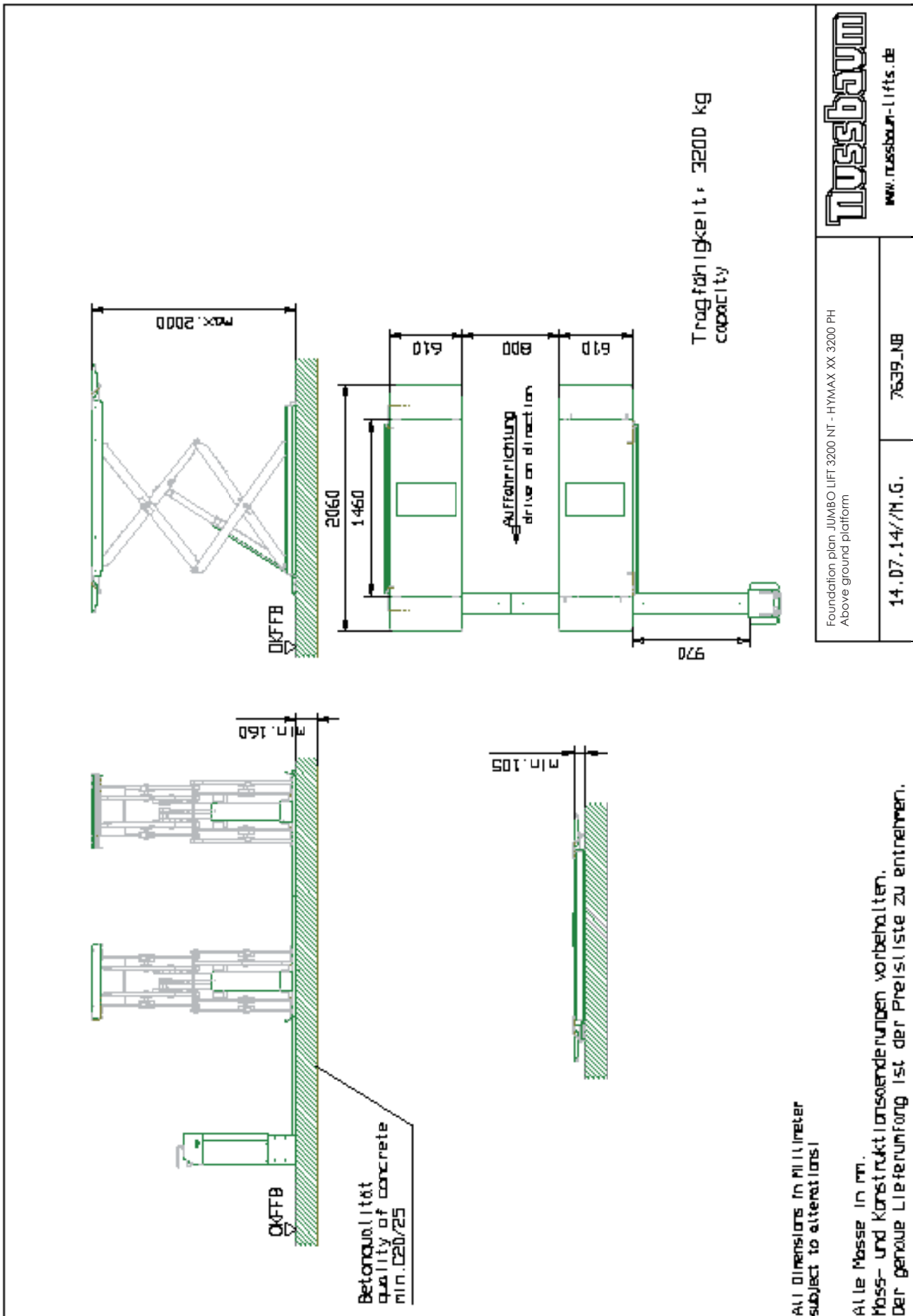


11 Foundation plans

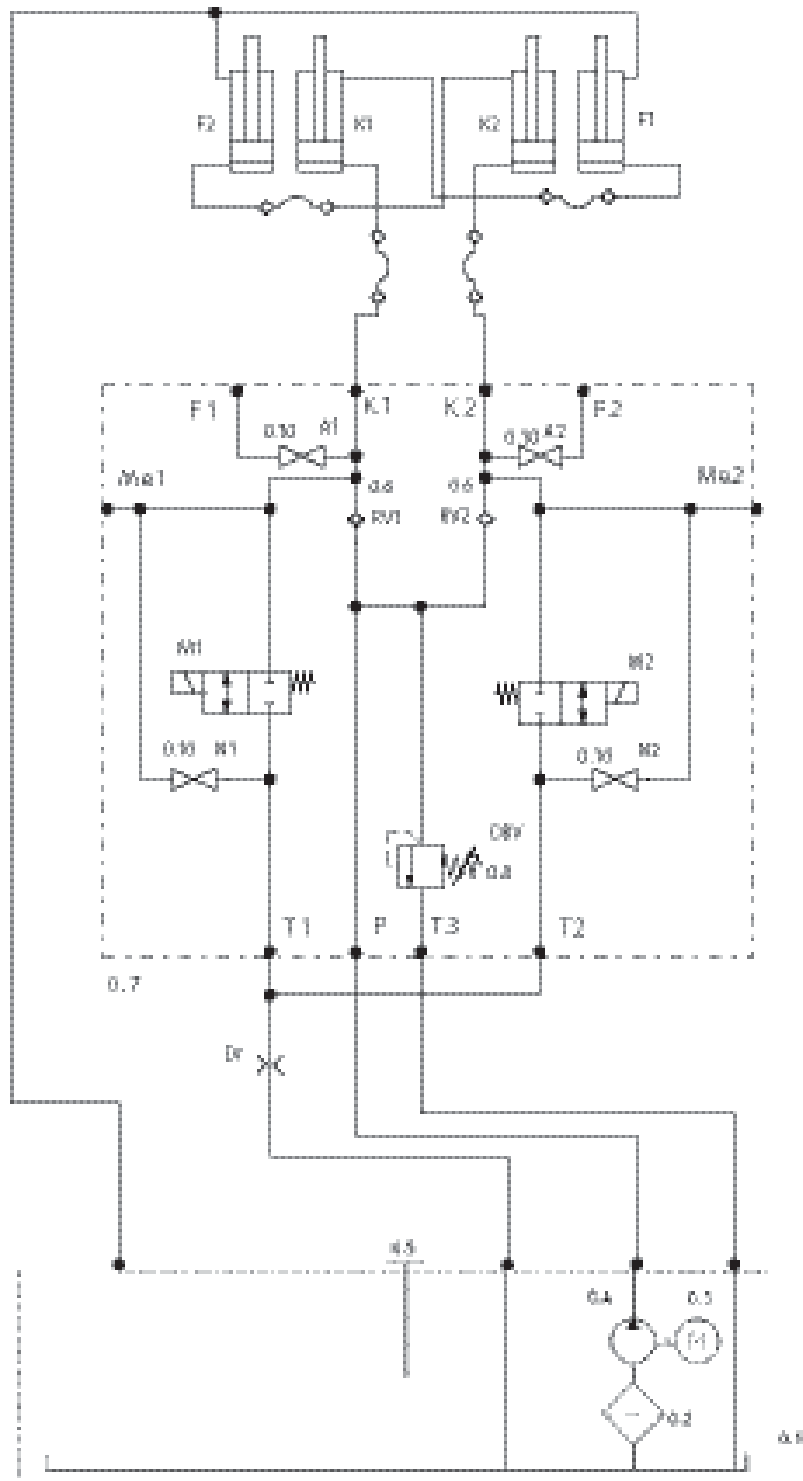
11.1 Sub-floor



11.2 Above ground



12 hydraulic plan

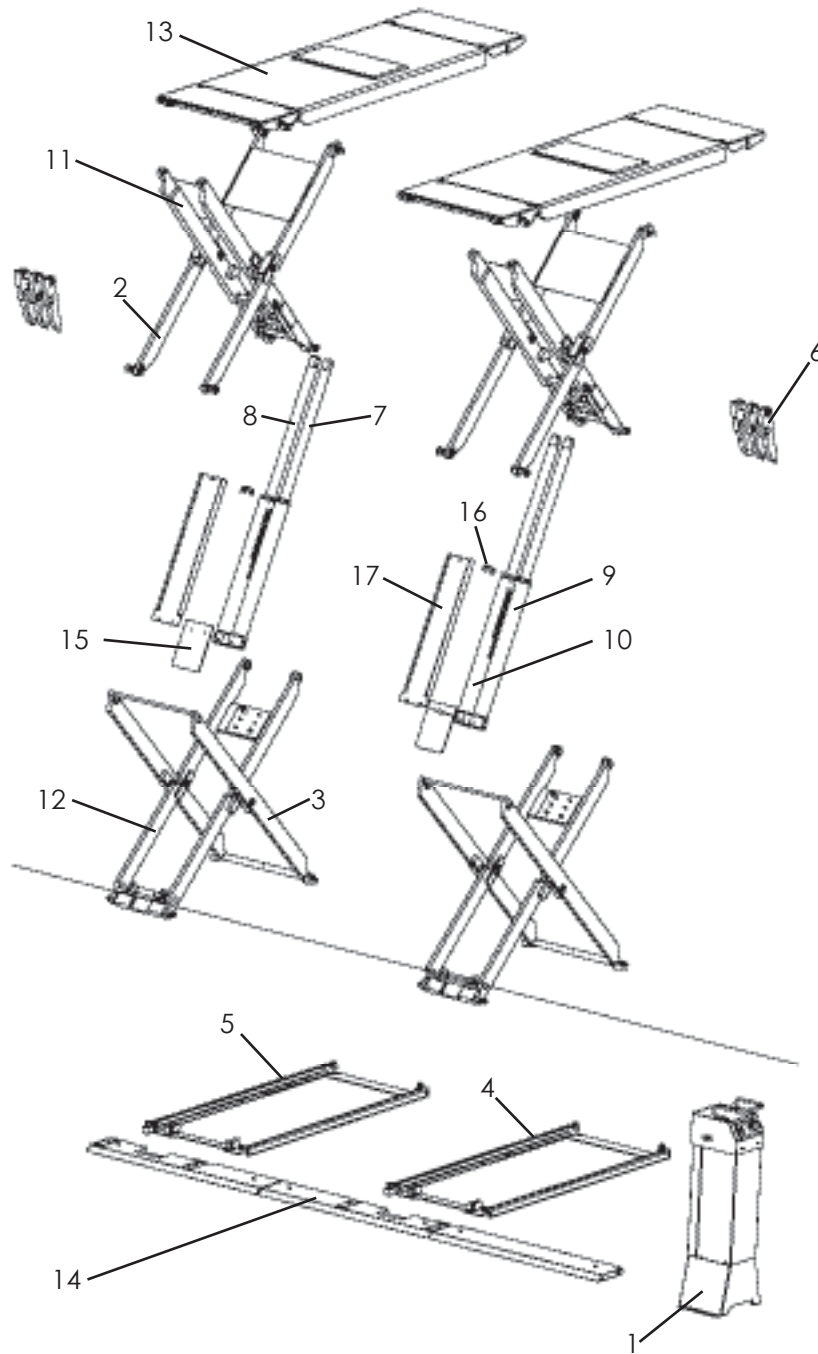


27.01.2015-30.01.2015 JUMBO LIFT HF 030JL82039 SBR

No.	Designation:	Drawing number	No.	Designation:	Drawing number
0.1	Oil container	030JL01353	0.7	Complete block	030JL82038
0.2	Suction filter	98012	0.8	Pressure relief valve	232NSTL02082
0.3	Mechanical pump	98340	0.9	Solenoid valve	9804781
0.4	Motor	992658	0.10	Emergency discharge screw	232TTL42038
0.5	Oil dipstick	982186			
0.6	Check valve	159604			

13 Replacement parts list

10.xx Platform



035jl00100_3 17.03.2015

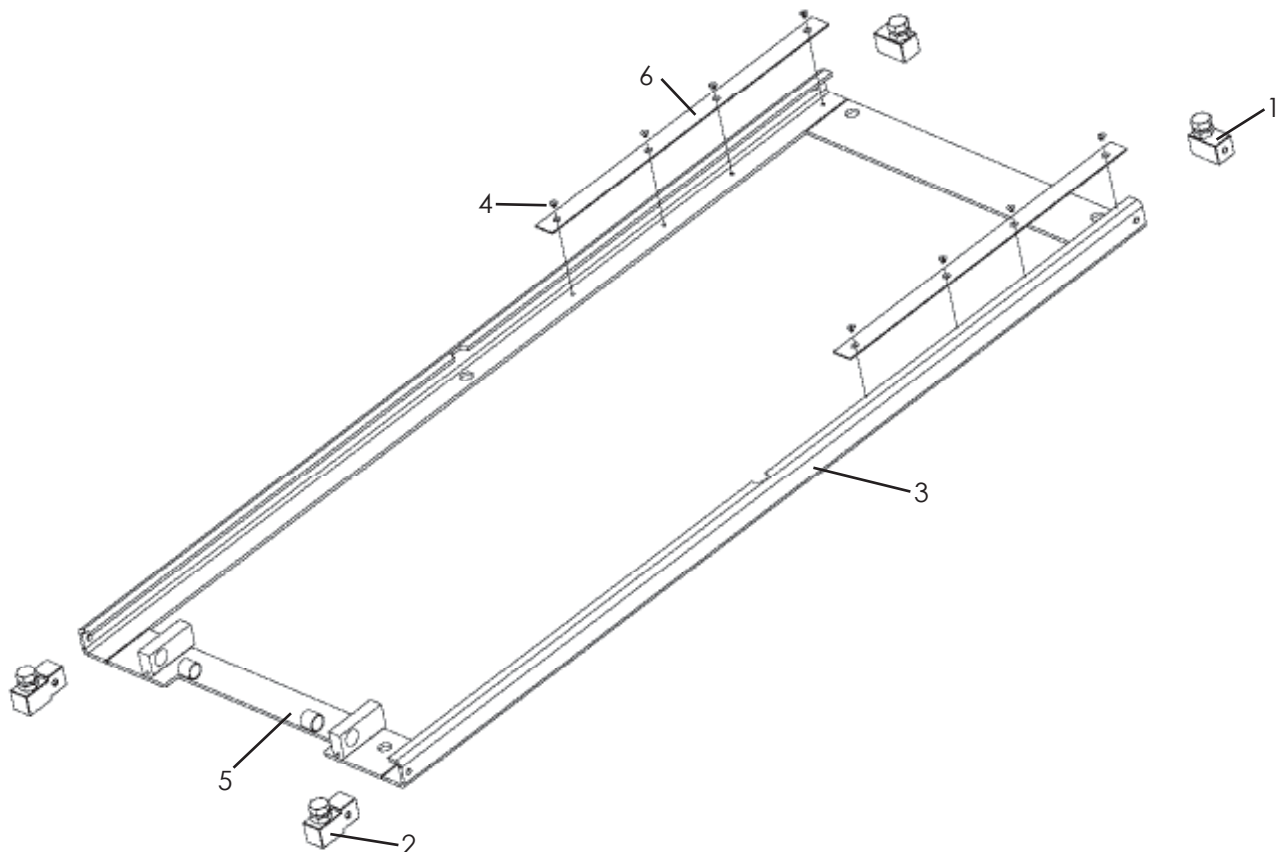
10.1	030JL21360	UNIT
10.2	035JL06031	EXTERIOR SCISSOR UPPER, COMPLETE
10.3	035JL06011	EXTERNAL SCISSOR LOWER, COMPLETE
10.4	035JL05210	FLOOR PANEL LEFT, COMPLETE
10.5	035JL05201	FLOORPANELRIGHT, COMPLETE

10.6	035JL06110	DOWNSTREAMCYLINDERLEVER, COMPLETE
10.7	040JL02704	AUXILIARY ASSEMBLY PISTON ROD, DOWNSTREAM SIDE

! WE RECOMMEND THAT YOU SEND DEFECTIVE CYLINDERS TO US FOR REPAIR. CYLINDERS WILL BE INSPECTED AND SENT BACK!

10.8	040JL02604	AUXILIARY GROUP PISTON ROD, COMMAND SIDE	10.11	035JL06221	INTERIOR SCISSORS TOP
<p>! WE RECOMMEND THAT YOU SEND DEFECTIVE CYLINDERS TO US FOR REPAIR. CYLINDERS WILL BE INSPECTED AND SENT BACK!</p>					
10.9	040JL02702	AUXILIARY GROUP CYLINDER PIPE, DOWNSTREAM SIDE	10.12	035JL06101	SCISSORS LOWER
<p>! WE RECOMMEND THAT YOU SEND DEFECTIVE CYLINDERS TO US FOR REPAIR. CYLINDERS WILL BE INSPECTED AND SENT BACK!</p>					
10.10	040JL02602	AUXILIARY GROUP CYLINDER PIPE, COMMAND SIDE	10.13	035JL08401	RAIL 1460 MM LONG, COMPLETE
<p>! WE RECOMMEND THAT YOU SEND DEFECTIVE CYLINDERS TO US FOR REPAIR. CYLINDERS WILL BE INSPECTED AND SENT BACK!</p>					
			10.14	030JL09530	HOSE COVER, COMPLETE
			10.15	040JL02629	RUBBER APRON
			10.16	040JL02631	CLAMP PANEL
			10.17	040JL02627	HOSE COVER FOR CYLINDER

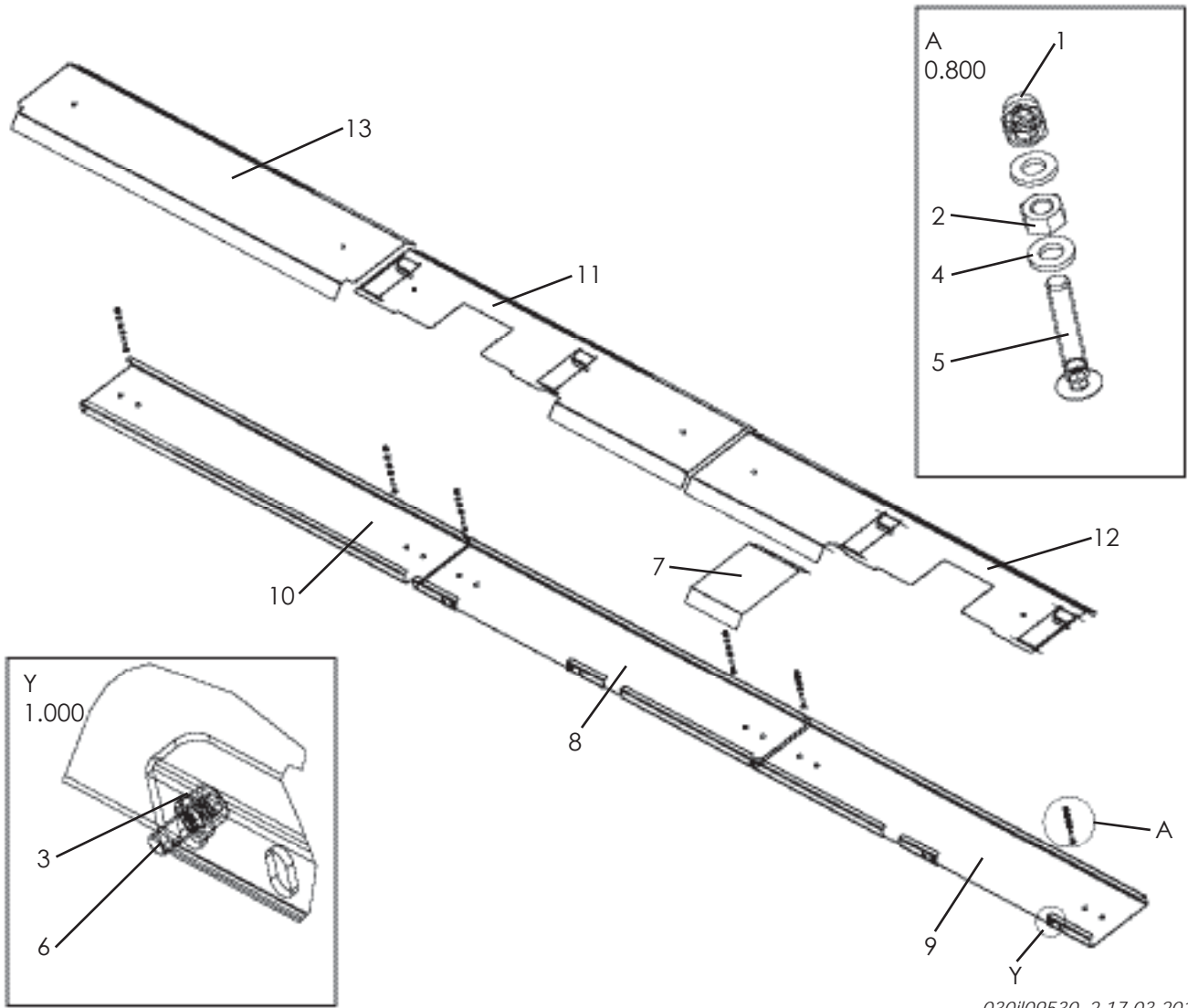
20.xx Floor panel, right



035jl05201_2 17.03.2015

20.1	040JL05020	SPACER FOOT 1 COMPLETE	20.4	97991-M5X6	COUNTERSUNK SCREW
20.2	040JL05010	SPACER FOOT 2 COMPLETE	20.5	9PAP202320P10	DU JACK
20.3	035JL05203	FLOOR PANEL, WELD PART	20.6	030JL05008	RUNNING PANEL

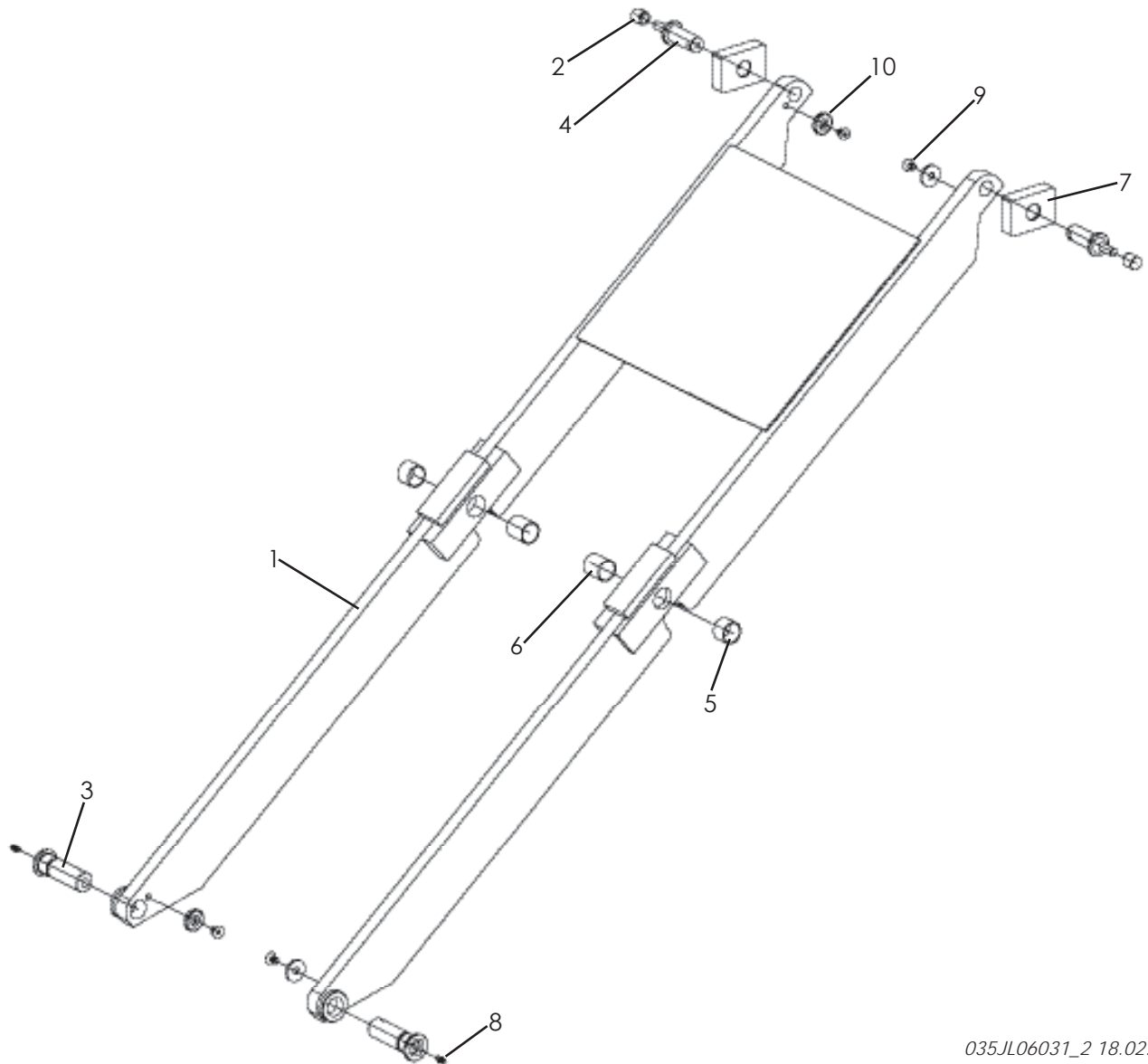
30.xx Hose cover



030jl09530_2 17.03.2015

30.1	91587-M6	ACORN NUT	30.7	030JL09552	BALANCE COVER
30.2	9934-M6	HEXAGONAL NUT	30.8	030JL09531	CABLE CONDUIT
30.3	9125_1-A5_3	WASHER	30.9	030JL09533	CABLE CONDUIT
30.4	9125_1-A6_4	WASHER	30.10	030JL09546	CABLE CONDUIT
30.5	97991-M6X35	COUNTERSUNK SCREW	30.11	030JL09541	CONDUIT COVER
30.6	9912-M5X12	CYLINDER SCREW	30.12	030JL09542	CONDUIT COVER
			30.13	030JL09548	CONDUIT COVER

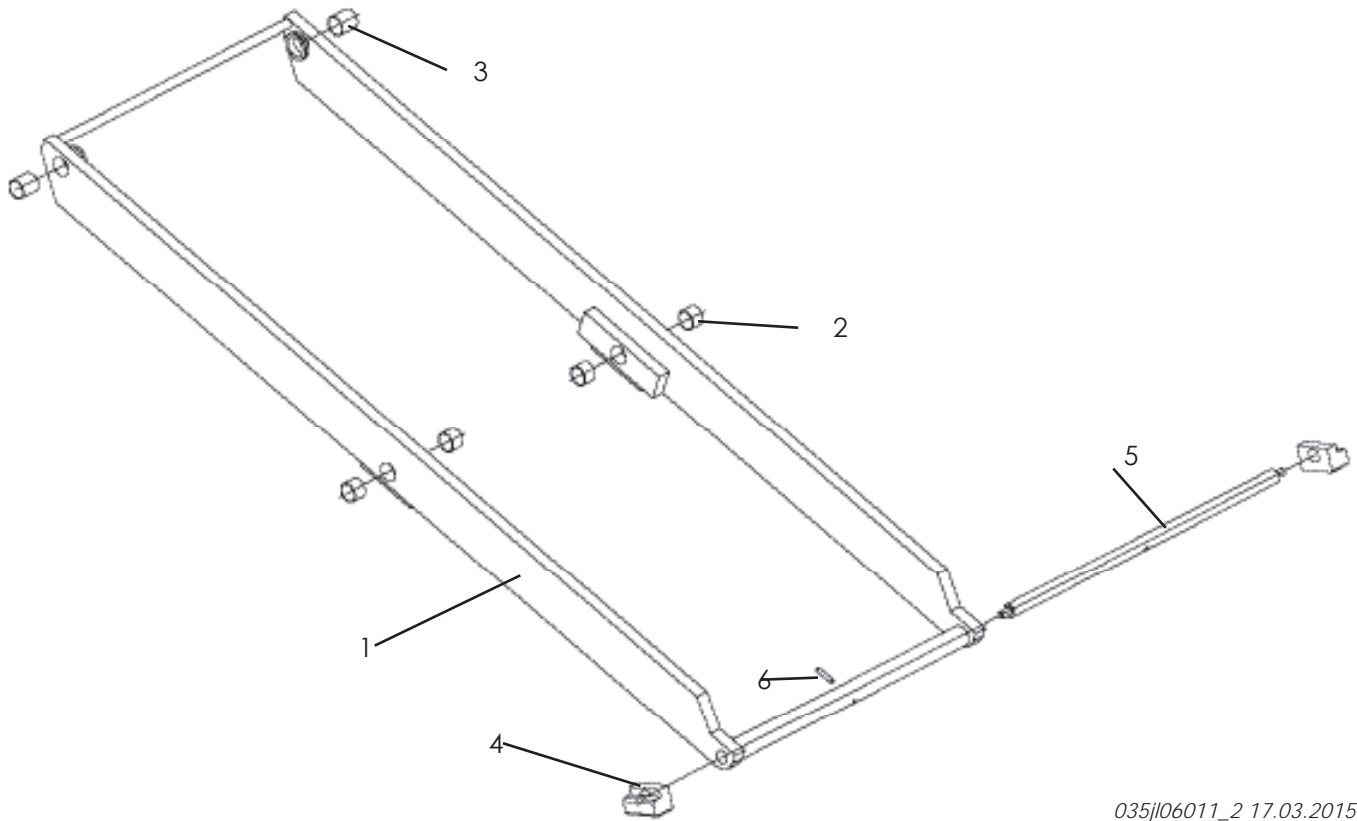
40.xx Exterior scissors top



035JL06031_2 18.02.2015

40.1	035JL06033	EXTERIOR SCISSORS TOP, WELD PART
40.2	030JL06166	START UP ROLLER
40.3	030JL26021	EXTERIOR BOLTS SCISSORS
40.4	030JL26165	EXTERIOR BOLTS SCISSORS
40.5	9PAP252820P10	DU JACK
40.6	9PAP252830P10	DU JACK
40.7	030JL26168	SLIDING PIECE TOP
40.8	971412-AM6	BALL LUBRICATION NIPPLE
40.9	97991-M8X12	COUNTERSUNK SCREW
40.10	030JL22023	LOCKING WASHER

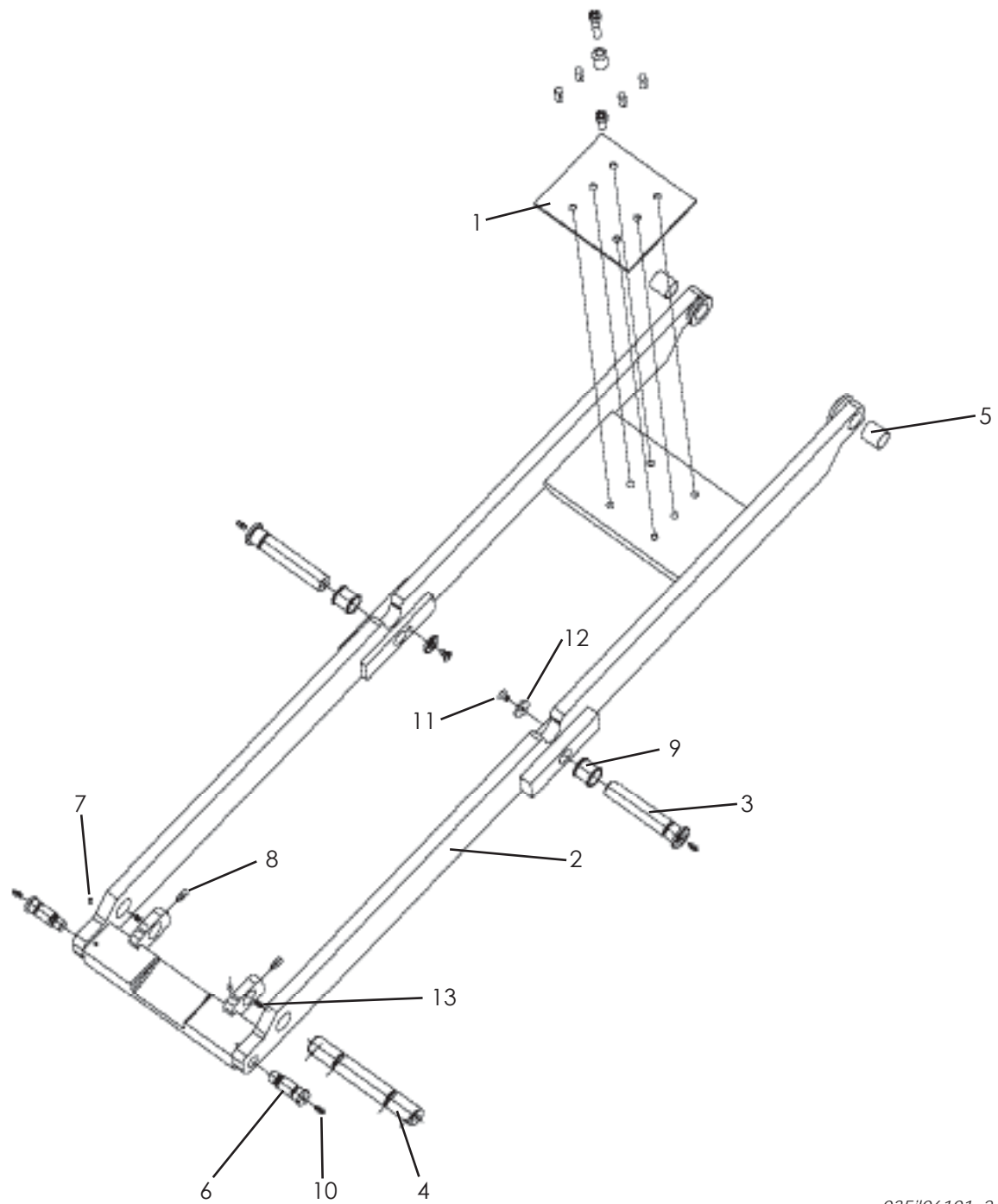
50.xx Exterior scissors lower



035jl06011_2 17.03.2015

50.1	035JL06013	EXTERIOR RAIL LOWER, WELD PART
50.2	9PAP252820P10	DU JACK
50.3	9PAP252830P10	DU JACK
50.4	035JL06017	SLIDING PIECE LOWER EXTERIOR
50.5	030JL06112	SLIDING PIECE AXIS
50.6	91481-6X30	FRICTION BOLT

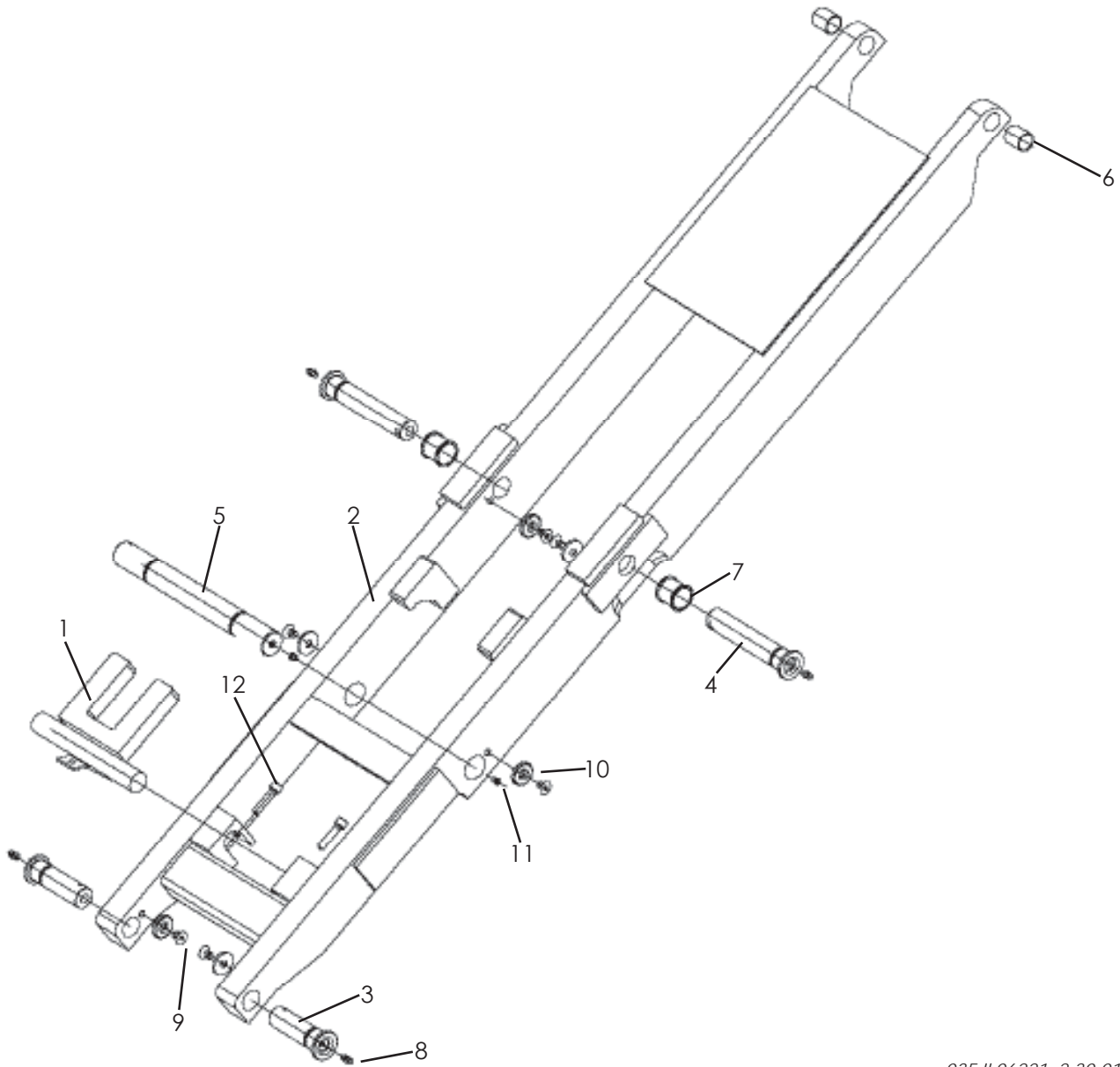
60.xx Scissors lower



035jl06101_2 17.03.2015

60.1	030JL66014	PRESSURE PLATE SET	60.8	030JL66028	SET SCREW
60.2	035JL06103	SCISSORS, WELD PART	60.9	030JL06030	SLEEVE
60.3	030JL26024	EXTERIOR BOLTS SCISSORS	60.10	971412-AM6	BALL LUBRICATION NIPPLE
60.4	030JL62021	CYLINDER BOLTS LOWER	60.11	97991-M8X12	COUNTERSUNK SCREW
60.5	9PAP252830P10	DU JACK	60.12	030JL22023	LOCKING WASHER
60.6	030JL05012	FIXED BEARING BOLTS	60.13	970554	LUBRICATION NIPPLE FUNNEL, STRAIGHT
60.7	9914-M5X12	SET SCREW			

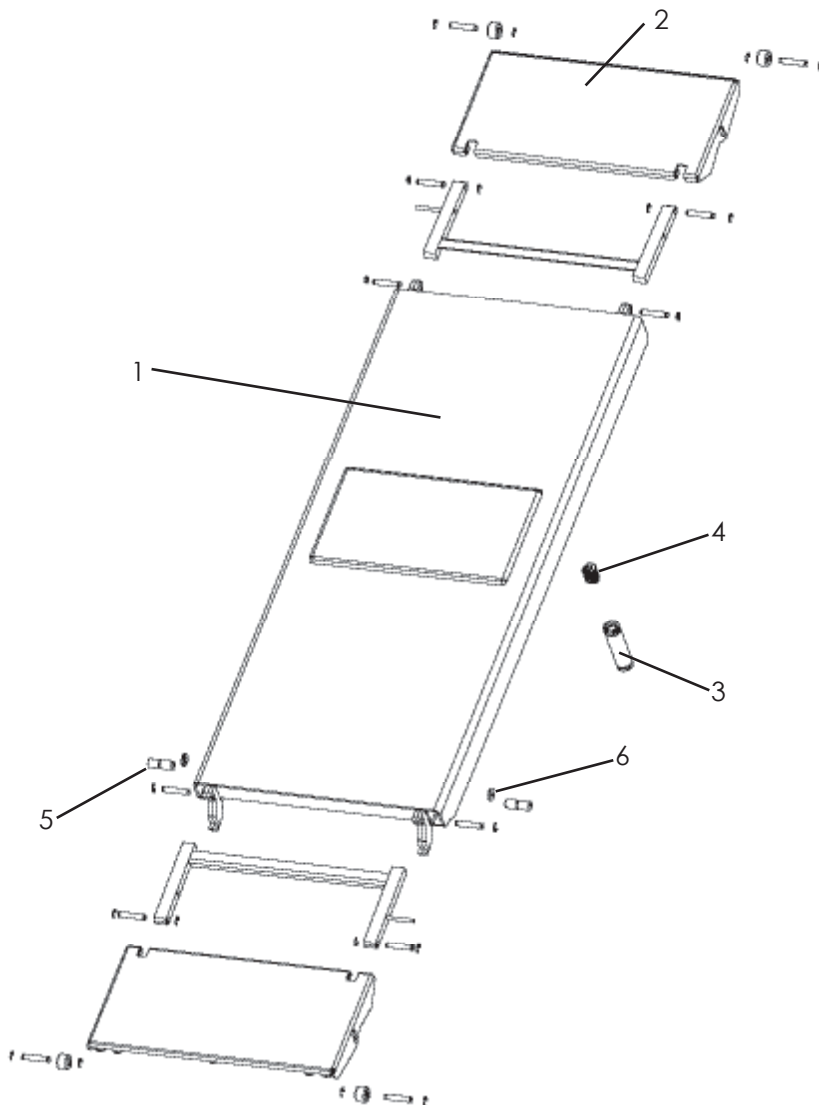
70.xx Interior scissors top



035JL06221_2 30.01.2015

70.1	030JL66093	BLOCKING, WELD PART	70.8	971412-AM6	BALL LUBRICATION NIPPLE
70.2	035JL06223	INTERIOR SCISSORS TOP	70.9	97991-M8X12	COUNTERSUNK SCREW
70.3	030JL26022	EXTERIOR BOLTS SCISSORS	70.10	030JL22023	LOCKING WASHER
70.4	030JL26025	EXTERIOR BOLTS SCISSORS	70.11	970554	LUBRICATION NIPPLE FUNNEL, STRAIGHT
70.5	030JL66090	ZE BOLTS	70.12	9912-M8X35	CYLINDER SCREW
70.6	9PAP202325P10	DU JACK			
70.7	030JL06030	SLEEVE			

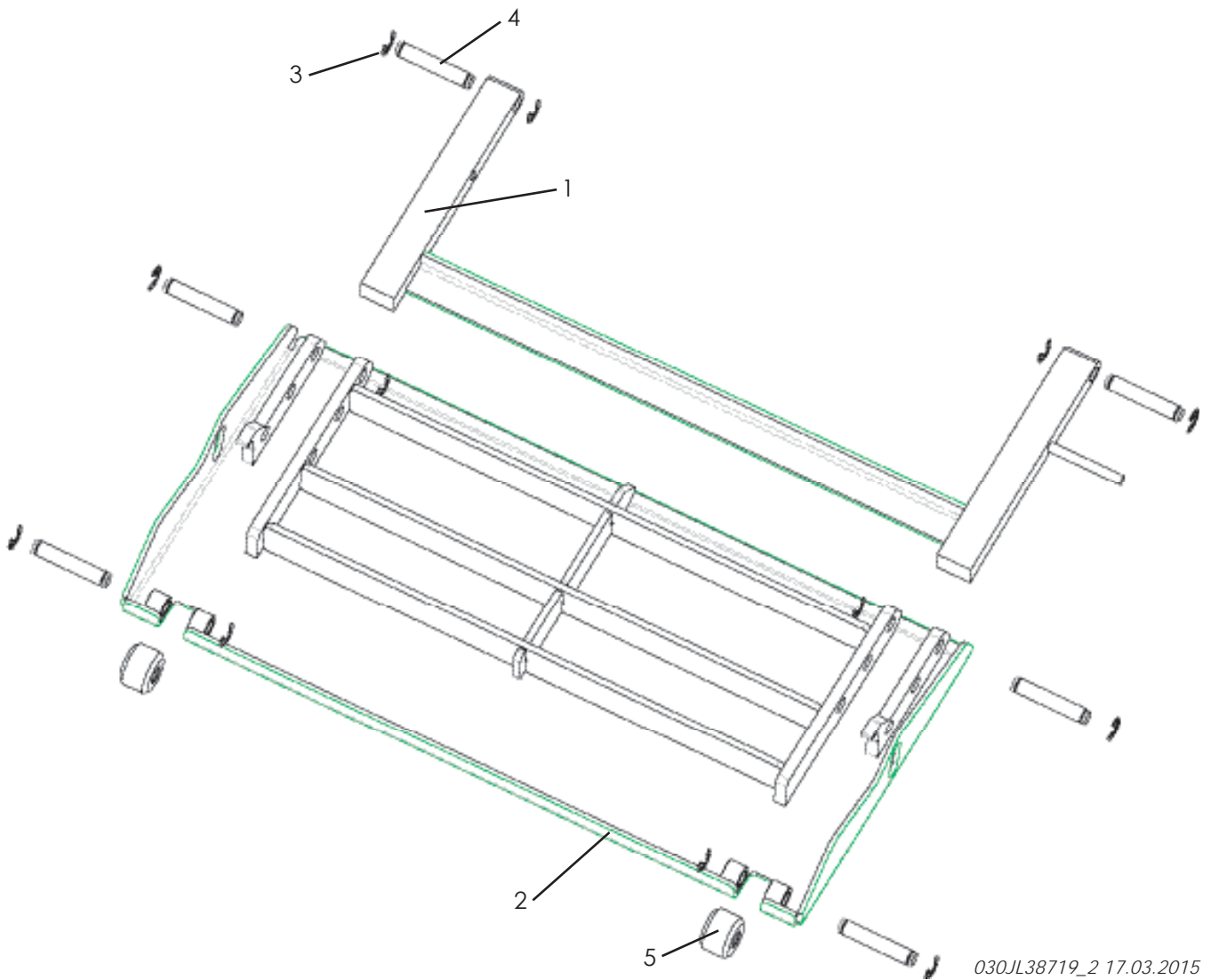
80.xx Rail



035JL08401_3 30.03.2015 IG

80.1	035JL08401	RAIL 1460 MM LONG, COMPLETE
80.2	030JL38719	RAMPS 300 MM LONG, COMPLETE
80.3	035JL08403	RAMP, WELD PART
80.4	025SPB06165	SPRING HOLDER
80.5	030JL22023	LOCKING WASHER
80.6	030JL68019	FESTLAGERBOLZEN SCHIENE
80.7	9DFD-357A2ZN	PRESSURE SPRING

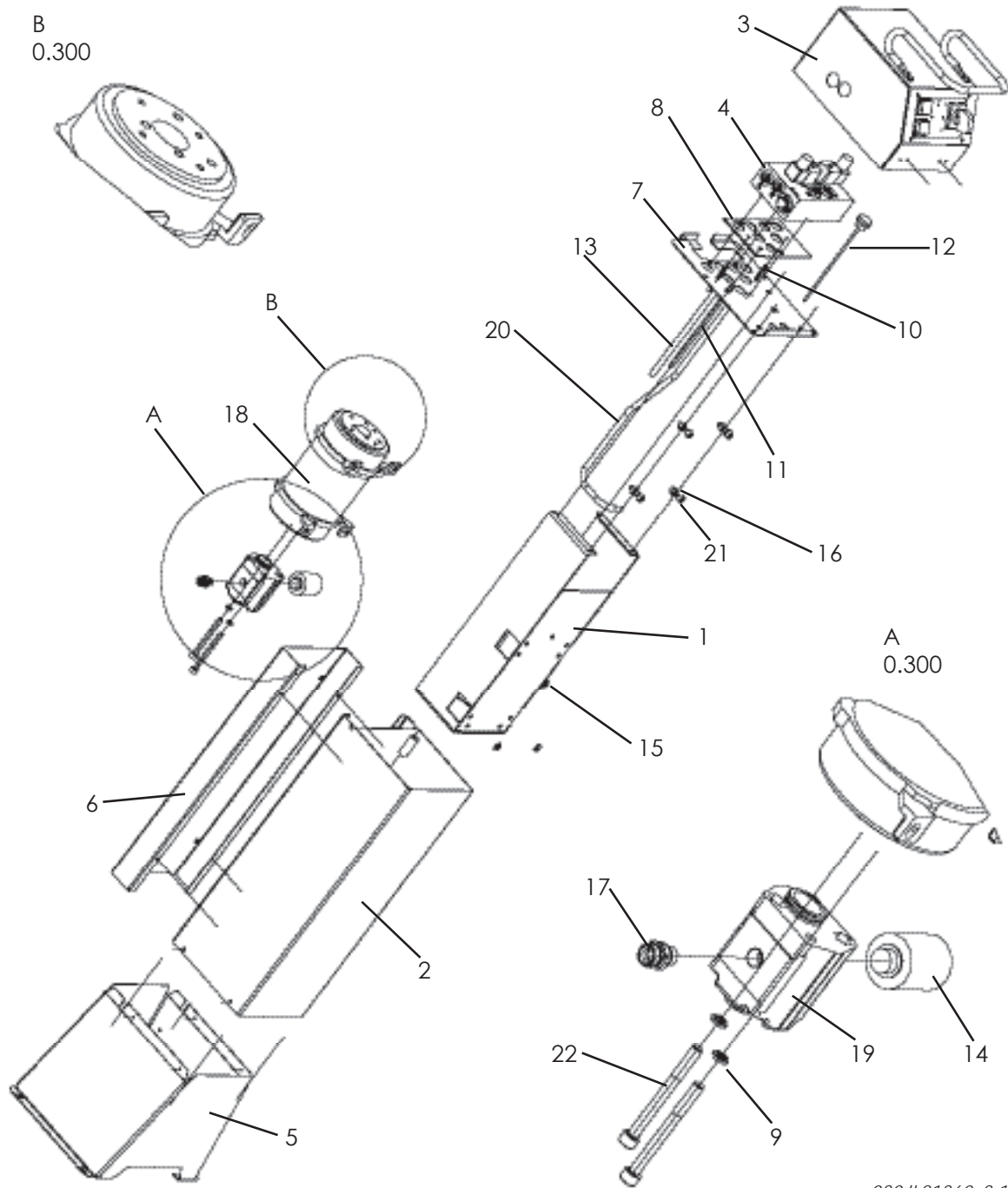
90.xx Ramps



030JL38719_2 17.03.2015

90.1	030JL38618	COMPLETE LEVER, WELD PART
90.2	030JL38720	RAMP, WELD PART 300 MM LONG
90.3	96799 -10	LOCKING WASHER
90.4	025SPB68627	BOLTS RD 12X66
90.5	025SPB68628	ROLLER

100.xx Unit



030JL21360_3 17.03.2015

100.1	030JL01320	RECEIVING PANEL, WELD PART	100.9	97980 -8	SPRING WASHER
100.2	030JL01353	HOLDER, WELD PART	100.10	030JL01364	HYDRAULIC PIPE
100.3	030JL41330	COMPLETE COVER	100.11	030JL01366	HYDRAULIC PIPE DM. 8
100.4	030JL82038	COMPLETE HYDRAULIC BLOCK	100.12	982186	OIL DIPSTICK
100.5	030JL21361	PEDESTAL, WELD PART	100.13	030JL21342	RETURN LINE
100.6	030JL01308	REAR COVER	100.14	980012	SUCTION FILTER
100.7	030JL41306	COVER PLATE	100.15	9125_1-A8_4	WASHER
100.8	030JL01362	SEAL FOR BLOCK	100.16	9934-M8	HEXAGONAL NUT

100.17 93901-L10A-M

SUPPORTS

100.20030JL21344

SUPPLY

100.18 992658

UNDER OIL MOTOR

100.21 9912-M8X25

CYLINDER SCREW

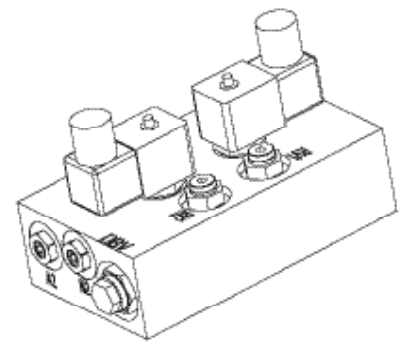
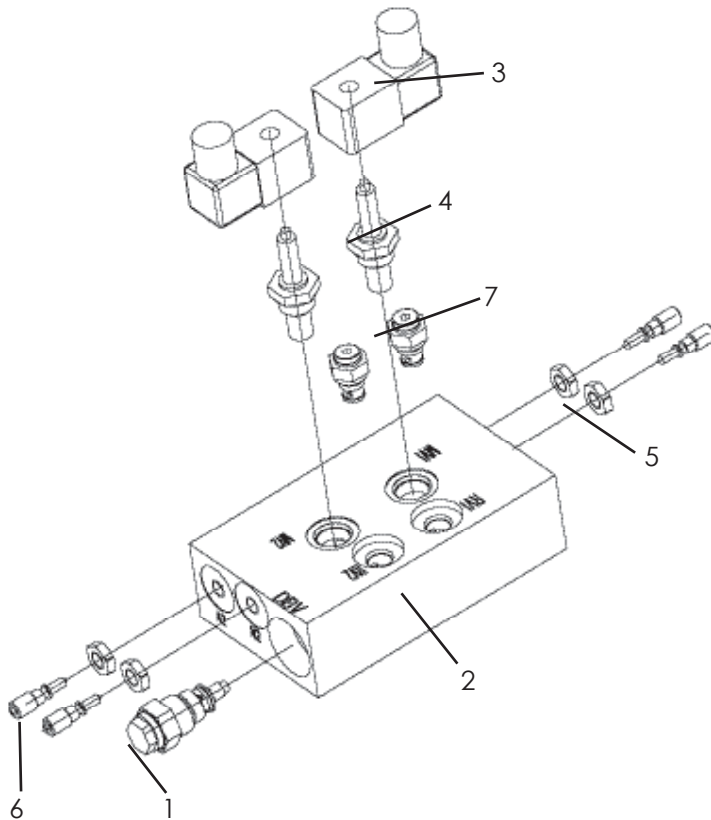
100.19 980340

MECHANICAL PUMP

100.229912-M8X85

CYLINDER SCREW

110.xx Hydraulic block



030JL82038 17.03.2015

110.1 232NSTL02082 PRESSURE RELIEF VALVE

110.2 030JL82039 HYDRAULIC BLOCK

110.3 980630 MAGNETIC COIL

110.4 980478 SOLENOID VALVE WITHOUT SIEVE

110.5 9MU439M10ZN HEXAGONAL NUT


110.6 232TTL42038 EMERGENCY DISCHARGE

110.7 980480 CHECK VALVE

120.xx Hydraulic hose sets

120.1	035JL01490	HOSE SET, STANDARD V1 WITH OVERFLOWS FOR ABOVE FLOOR USE (HYPERFLOW)	120.17	035JL01492	HOSE SET STANDARD WITH OVERFLOWS FOR BMW (HYPERFLOW)
120.2	983652	HOSE, 2SC, DN6X2100, DKOL-DKOL	120.18	983658	HOSE, 2SC, DN06X6350, DKOL, DKOL
120.3	983655	HOSE, 2SC, DN06X3400, DKOL, DKOL	120.19	982132	HOSE, 2SC, DN06X7700, DKOL, DKOL
120.4	983662	HOSE, 2SC, DN06X2100, CEL, CELM12X1,5	120.20	983662	HOSE, 2SC, DN06X2100, CEL, CELM12X1,5
120.5	983662.1	HOSE, 2SC, DN06X2100, CEL, CELM12X1,5	120.21	983662.1	HOSE, 2SC, DN06X2100, CEL, CELM12X1,5
120.6	983663	HOSE, 2SC, DN06X2650, CEL, DKOL 90°	120.22	983659	HOSE, 2SC, DN06X7100, DKOL, DKOL
120.7	983664	HOSE, 2SC, DN06X1180, CEL, DKOL	120.23	983660	HOSE, 2SC, DN06X8500, DKOL, DKOL
120.8	980936	HOSE, 2SC, DN06X0450, CEL, CEL12X1.5SHAPEB	120.24	980936	HOSE, 2SC, DN06X0450, CEL, CEL12X1.5SHAPEB
120.9	035JL01491	HOSE SET, STANDARD V2 WITH OVERFLOWS FOR SUB-FLOOR USE (HYPERFLOW)			
120.10	983652	HOSE, 2SC, DN6X2100, DKOL-DKOL			
120.11	983655	HOSE, 2SC, DN06X3400, DKOL, DKOL			
120.12	983662	HOSE, 2SC, DN06X2100, CEL, CELM12X1,5			
120.13	983662.1	HOSE, 2SC, DN06X2100, CEL, CELM12X1,5			
120.14	983665	HOSE, 2SC, DN06X2750, DKOL, DKOL			
120.15	983666	HOSE, 2SC, DN06X4150, DKOL, DKOL			
120.16	980936	HOSE, 2SC, DN06X0450, CEL, CEL12X1.5SHAPEB			

14 Set up protocol

 After successful set up, complete this form fully, sign it, make a copy and send to the manufacturer within a week.

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

The system with serial number _____ was set up on (date) _____ at
(company name) _____ in (town, city) _____
_____ checked for function and safety and put into operation. .

The set up was done by the operating company / specialist (score out the one that does not apply).

The operating company confirms proper system set up, has read and will comply with all information contained in this operating manual and inspection book, and will keep this document accessible to trained operators at all times.

The specialist confirms proper system set up, has read all information in this operating manual and inspection book, and has transferred the documents to the operating company.

Date *Name, Operating company & company stamp* *Operating company signature*

Date *Name, Specialist* *Specialist signature*

Service partner: _____
Stamp

Only fill out if the system has a fixed anchor.

Anchor used *) _____
Type/ brand

Minimum anchor depth *) complied with: _____ mm

Tightening torque *) complied with: _____ Nm

*) See 4.2.1 selecting the anchor

14.1 Transfer protocol

The system _____
 with serial number _____ was set up on (date) _____
 at (company name) _____ in (town, city) _____

checked for function and safety and put into operation.

The following listed people (operators) were trained to handle the lift after it was set up by a trained assembler of the manufacturer or a contract partner (specialist).

(Date, name, signature, empty lines must have a scored out)

_____	_____	_____
<i>Date</i>	<i>Name</i>	<i>Signature</i>

_____	_____	_____
<i>Date</i>	<i>Name</i>	<i>Signature</i>

_____	_____	_____
<i>Date</i>	<i>Name</i>	<i>Signature</i>

_____	_____	_____
<i>Date</i>	<i>Name</i>	<i>Signature</i>

_____	_____	_____
<i>Date</i>	<i>Name</i>	<i>Signature</i>

_____	_____	_____
<i>Date</i>	<i>Name, specialist</i>	<i>Signature of specialist</i>

Service partner: _____ (Stamp)

15 Safety inspection

15.1 Single safety inspection before commissioning

 Copy, complete and leave in the inspection book

Serial number: _____

Test step	OK	Defective or Missing	Retest	Remarks
Model plate _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Operating manual _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Load capacity details on the system _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Main switch function _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Function button "LIFT, LOWER" _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
General system condition _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition / function of foot bumper (optional) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition/ function ramps / rollers _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Securing the bolts _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition of bolts and bearing seating _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Load bearing construction (deformations, cracks) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Unit condition _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Cover conditions _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Paint condition _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition piston rods and wipers _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hydraulic system leak-tightness _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hydraulic oil filling level _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hydraulic line conditions _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition hydraulic screw fittings _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition electrical lines _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition of weld seams _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fastening anchor torque _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fastening screw torque _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition of polymer overlays _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition of concrete floor (cracks) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Function CE stop and warning signal (optional) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Function balance of rails _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Functional test, system with load _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

*) Place a checkmark in the relevant, if a retest is required then check it again!

Safety inspection done on: _____

Performed by company: _____

Name, address of specialist: _____

Result of inspection: Continued operation questionable, reinspection required
 Continued operation possible, remove defects by _____
 No deficiencies, continue to operate

Signature of specialist

Operating company signature

If requested to take care of deficiencies

Deficiency removed on: _____
Operating company signature

(use a new form for reinspection!)

15.2 Regular safety inspection and maintenance

 Copy, complete and leave in the inspection book

Serial number: _____

Test step	OK	Defective or Missing	Retest	Remarks
Model plate _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Operating manual _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Load capacity details on the system _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Main switch function _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Function button „LIFT, LOWER“ _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
General system condition _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition / function of foot bumper (optional) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition/ function ramps / rollers _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Securing the bolts _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition of bolts and bearing seating _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Load bearing construction (deformations, cracks) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Unit condition _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Cover conditions _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Paint condition _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition piston rods and wipers _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hydraulic system leak-tightness _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hydraulic oil filling level _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hydraulic line conditions _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition hydraulic screw fittings _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition electrical lines _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition of weld seams _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fastening anchor torque _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fastening screw torque _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition of polymer overlays _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition of concrete floor (cracks) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Function CE stop and warning signal (optional) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Function balance of rails _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Functional test, system with load _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

*) Place a checkmark in the relevant, if a retest is required then check it again!

Safety inspection done on: _____

Performed by company: _____

Name, address of specialist: _____

- Result of inspection:
- Continued operation questionable, reinspection required
 - Continued operation possible, remove defects by _____
 - No deficiencies, continue to operate

Signature of specialist

Operating company signature

If requested to take care of deficiencies

Deficiency removed on: _____
Operating company signature

(use a new form for reinspection!)

15.3 Exceptional safety inspection

 Copy, complete and leave in the inspection book

Serial number: _____

Test step	OK	Defective or Missing	Retest	Remarks
Model plate _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Operating manual _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Load capacity details on the system _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Main switch function _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Function button „LIFT, LOWER“ _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
General system condition _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition / function of foot bumper (optional) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition/ function ramps / rollers _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Securing the bolts _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition of bolts and bearing seating _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Load bearing construction (deformations, cracks) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Unit condition _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Cover conditions _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Paint condition _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition piston rods and wipers _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hydraulic system leak-tightness _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hydraulic oil filling level _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hydraulic line conditions _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition hydraulic screw fittings _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition electrical lines _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition of weld seams _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fastening anchor torque _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fastening screw torque _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition of polymer overlays _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Condition of concrete floor (cracks) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Function CE stop and warning signal (optional) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Function balance of rails _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Functional test, system with load _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

*) Place a checkmark in the relevant, if a retest is required then check it again!

Safety inspection done on: _____

Performed by company: _____

Name, address of specialist: _____

- Result of inspection:
- Continued operation questionable, reinspection required
 - Continued operation possible, remove defects by _____
 - No deficiencies, continue to operate

Signature of specialist

Operating company signature

If requested to take care of deficiencies

Deficiency removed on: _____

Operating company signature

(use a new form for reinspection!)

16 Electrical circuit diagram

Object: JUMBO NT
 System:
 Customer:
 Circuit diagram number: JUMBO NT 03/14/001

Grounding according to local regulations

Before commissioning check whether the nominal motor current matches the motor protection relay. Check all terminal points for proper connection and that all contact screws are tight. Before commissioning, check all wiring and controls for proper function. Do not permit commissioning from the unauthorized side.

These plans were generated on a CAD system. To keep plans to the current state, we ask that you request Nußbaum to make the changes.

These circuit diagrams are intellectual property. They may not be given to third parties or reproduced without our permission!

Rights to make changes are retained.

Circuit diagram and switch documents

Circuit diagrams were made to the best of our knowledge.

No warranty for the correctness of provided circuit diagrams and switch documents is given. This is particularly relevant for switches that were completed by us according to third party plans. This was done by us from purchaser provided manufacturer documentation.

Functional test of switch systems

Circuit diagrams are not standard documents. When checking the control cabinet at the factory, field devices such as sensors, thermostats and motors cannot be included. For this reason, even with careful inspection, functional and switch errors cannot always be prevented.

Deficiencies are removed within the scope of guarantee during commissioning. During commissioning, if our services are not used, then no deficiency liability is accepted. Rework, including informing of circuit diagrams of switch systems not commissioned by us are therefore only done to an invoice according to our service terms and conditions. Costs for rework by third parties cannot be honored.

Safety inspection and safety measures

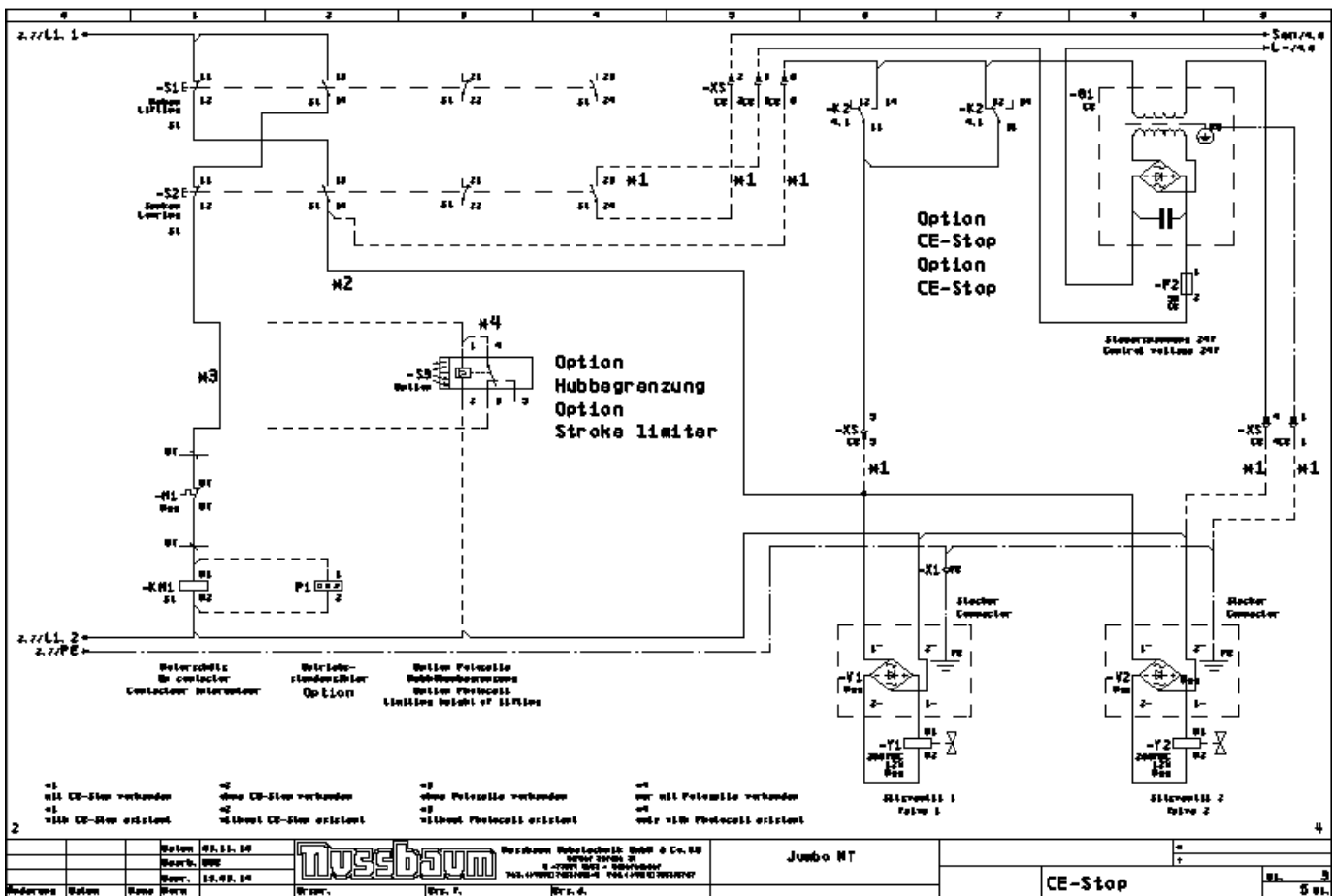
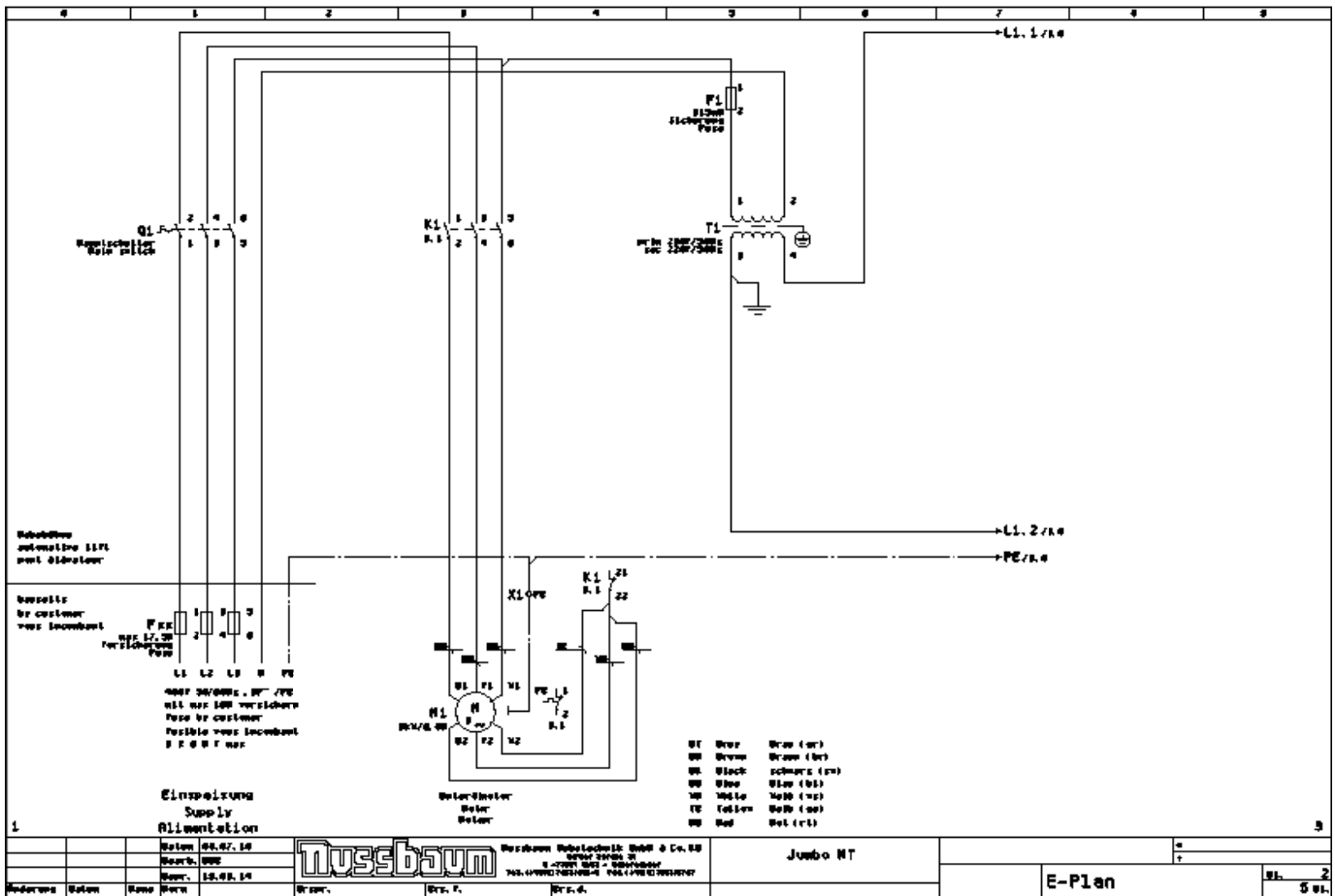
The control cabinet has been produced, set up and inspected according to recognized technology rules according to VDE0100/0113 and accident prevention regulation VBG4 (electrical systems and equipment)

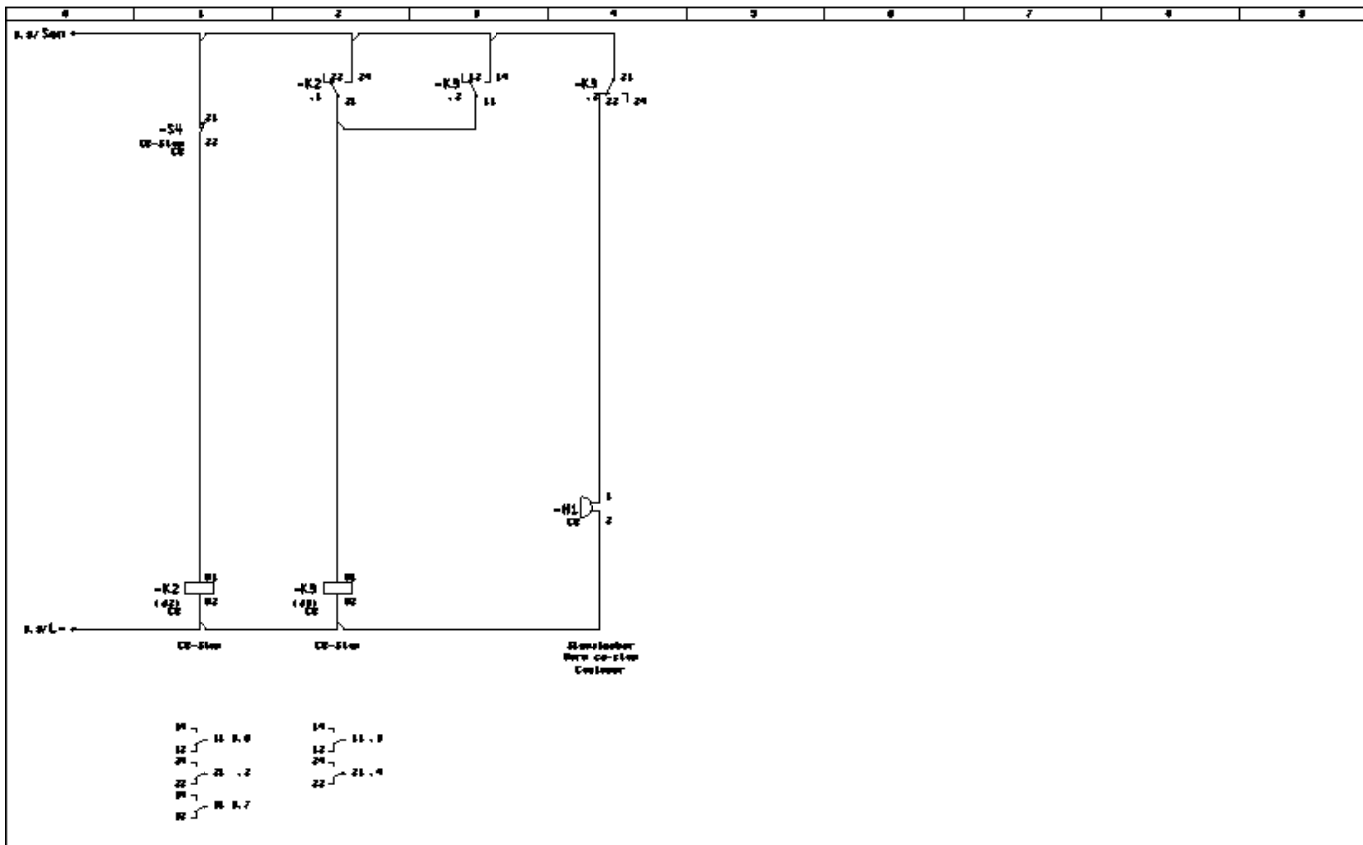
The following tests were done:

- Voltage test and/or insulation test of the control cabinet according to VDE0100/5.73
- Inspection of effectiveness of the safety measures used for indirect contact according to VDE0100g/7.75 para. 22
- Functional test and part test according to VDE560/11.87

Implemented safety measures:

- Protection against direct contact according to VDE0100/5.73. para. 4
- Protection against indirect contact according to VDE0100/5.73. para. 5





Datum: 05.11.10		Nussbaum Hydraulik GmbH & Co. KG Europ. Zentrale D-72618 Bad - Mergentheim Tel. 07143 923100-4 Fax 07143 923107	Jumbo NT		=			
Bearb. WSE					+			
Rev. 1.0.03.14								
Anders	Datum	Name	Fern	Gr. Nr.	Gr. N.	Gr. G.	CE-Stop	Bl. 5

Stückliste		Bill of materials		Liste de matériel		NUSBAUM 12.01.2009	
Bezeichnung Component design. Désign. composant	Menge Amount Qté.	Bezeichnung Description Description matériel	Typennummer Model number Número de type	Lieferant Supplier Fournisseur	Artikelnummer Article number N° d'article		
-F1	1	Schaltkontakt 0 2 3/0 V. 000 sch-sch	0 2 3/0 V. 000	Stralec	200693		
-G1	1	Rechts. Rot-Stop Nr. 200 3 201	0 202/3. 000-01/20	Str. & Böh	200694		
-F2	1	Fremdsprünghalter EE 002/20	10000 1-00	Schleier	200695		
-F3	1	Sicherungslehne Fremser 3-20 mm	0420 EP	Stralec	200691		
-F4	1	Schaltkontakt 00 2 3/0 V. 000 sch-sch	00 2 3/0 V. 000	Stralec	200678		
-F5	1	Feldschere	FE 0000000000	WIP	200619		
-W1	1	Unterlenker 00 W 0 4/11. 00 200x	00 W 2-071	Wipac GmbH	202034		
-F6	1	Kontaktschalter mit Drehmomentlichter	0000000000 0000000000	Johanne	241002		
-F7	1	Kontaktschalter mit Drehmomentlichter	0000000000 0000000000	Johanne	241003		
-F8	1	Regelventil 2000 UC 124 : 2000 E	0000000000 EL	Johanne	241004		
-F9	1	Regelventil 2000 UC 124 : 2000 E	0000000000 EL	Johanne	241005		
-G4	1	FI-00 00 00	0000000000 10 15 0000 000000		200699		
-G2	1	0000000000 207 4 Wechsler	2700	WIP	200697		
-G3	1	0000000000 207 4 Wechsler	2700	WIP	200697		
-F2	1	Feldschere	FE 0000000000	WIP	200697		
-F6	1	Flachlochbohrer 0 polis ko	02 0-10000-0	WIP	200627		
-F6	1	Flachlochbohrer 0,2 mm	02007 120 111	WIP	200628		
-F6	1	Flachlochbohrer 0,2 mm 0020 ohne ISO	00002 120 211	WIP	200629		
-F6	1	Wechselbohrer 0 polis ko	2 003 00200203	WIP	200630		
-G1	1	Winkelstahlischer 00mm	007 220	Wipac Components	200691		
-G2	1	Induktionsventil 00 4 Wechsler	110070	WIP	200691		
-G3	1	Induktionsventil 00 4 Wechsler	110070	WIP	200691		
-F2	1	Sicherungslehne Fremser 3-20 mm	0420 EP	Stralec	200691		
-G1	1	Frage + Gleichrichter + Kondensator	10000 1-00	Schleier	200693		
-G2	1	Reflexionslichtschranke M.200-0200	0000000000-1 0000000000 M.20000		202220		
-G1	1	PTC-Schmelze für Schalter Karwend	200 201 001	Karwend GmbH	200621		
-G2	1	PTC-Schmelze für Schalter Karwend	200 201 001	Karwend GmbH	200621		
-G1	1	Bruchkiste schwarz 25 20 Karwend	1000 0101	Karwend GmbH	200694		
-G2	1	Bruchkiste schwarz 25 20 Karwend	1000 0101	Karwend GmbH	200694		
-G3	1	Leiterschleife 3,7 0V 200 F 30-00 00	100012 01 0 200F 00	Lorate electric	200691		

Datum: 05.11.10		Nussbaum Hydraulik GmbH & Co. KG Europ. Zentrale D-72618 Bad - Mergentheim Tel. 07143 923100-4 Fax 07143 923107	Jumbo NT		=			
Bearb. WSE					+			
Rev. 1.0.03.14								
Anders	Datum	Name	Fern	Gr. Nr.	Gr. N.	Gr. G.	Stückliste	Bl. 5

17 Declaration of conformity

17.1 JUMBO LIFT 3200 NT

EG- Konformitätserklärung

gemäß Maschinenrichtlinie Anhang II 1A

Declaration of Conformity according Machinery Directive 2006/42/EG ANNEX II 1A
Déclaration de conformité selon directive machines annexe II 1A
Declaración de conformidad según Directiva Maquinaria 2006/42/EG ANNEX II 1A
Dichiarazione di conformità in accordo alla direttiva 2006/42/EG ANNEX II 1A

Hiermit erklären wir, daß die Hebebühne, Modell:

JUMBO LIFT 3200 NT

Honoby we declare that the lift model:
Par la présente nous déclarons que le pont élévateur modèle:
Por la presente declara, que el elevador modelo:
Con la presente si dichiara che il sollevatore:

allen einschlägigen Bestimmungen der folgenden Richtlinien entspricht:

fulfils all the relevant provisions of the following Directives:
conforme aux normes suivantes:
cumple todas las disposiciones pertinentes de las Directivas siguientes:
adempie a tutte le richieste delle seguenti direttive:

Maschinenrichtlinie / Machinery Directive
EMV Richtlinie / EMC Directive

2006/42/EG
2004/108/EG

in Übereinstimmung mit den folgenden harmonisierten Normen gefertigt wurde

was manufactured in conformity with the harmonized norms
fabriqué en conformité selon les normes harmonisées en vigueur.
producido de acuerdo a las siguientes normas armonizadas.
è stato fabbricato in conformità con la norma armonizzata

Fahrzeug- Hebebühnen / Vehicle lifts

EN 1493: 2010

Beauftragter für die Technische Dokumentation
Authorized to compile the technical file

Otto Nussbaum GmbH & Co. KG

Seriennummer
Serial number

Seriennummer

Kehl- Bodersweiler, 31.03.2015

Dr. Martin Huck
Geschäftsführer Technik / COO

17.2 HYMAX XX 3200 PH

EG- Konformitätserklärung



gemäß Maschinenrichtlinie Anhang II 1A

Declaration of Conformity according Machinery Directive 2006/42/EG ANNEX II 1A
 Déclaration de conformité selon directive machines annexe II 1A
 Declaración de conformidad según Directiva Maquinaria 2006/42/EG ANNEX II 1A
 Dichiarazione di conformità in accordo alla direttiva 2006/42/EG ANNEX II 1A

Hiermit erklären wir, daß die Hebebühne, Modell:

HYMAX XX 3200 PH

Hereby we declare that the lift model:
 Par la présente nous déclarons que le port élévateur modèle:
 Por la presente declaramos que el elevador modelo:
 Con la presente si dichiara che il sollevatore:

allen einschlägigen Bestimmungen der folgenden Richtlinien entspricht:

fulfils all the relevant provisions of the following Directives;
 correspond aux normes suivantes;
 cumple todas las disposiciones pertinentes de las Directivas siguientes;
 adempie a tutte le richieste della seguente direttiva:

Maschinenrichtlinie / Machinery Directive
 EMV Richtlinie / EMC Directive

2006/42/EG
 2004/108/EG

in Übereinstimmung mit den folgenden harmonisierten Normen gefertigt wurde

was manufactured in conformity with the harmonized norms;
 fabriqué en conformité selon les normes harmonisées en vigueur;
 producido de acuerdo a las siguientes normas armonizadas;
 è stato fabbricato in conformità con le norme armonizzate

Fahrzeug- Hebebühnen / Vehicle lifts

EN 1493: 2010

Beauftragter für die Technische Dokumentation
 Authorised to compile the technical file

Otto Nußbaum GmbH & Co. KG

Seriennummer
 Serial number

 Seriennummer

Kehl- Bodersweier, 31.03.2015

 Dr. Martin Huck
 Geschäftsführer Technik / COO

Doc-ATT_HYMAX-XX-3200-PH_2015-03-30-000x



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