

MANUAL
FOR
MOBILE COLUMN LIFT
EHB 707V11-4
EHB 707V11-6

SERIAL-NO.: <<S/N>>

**DATE OF MANUFACTURE/
DELIVERY:** <<Datum>>

CUSTOMER: <<Name>>



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SET – UP INSTRUCTIONS

Installer: Please follow these instructions to ensure a satisfactory set-up and operation of the lift

SET-UP OF COLUMN

1. Transport: Columns are shipped in the vertical position. Do not tilt them!
2. Unloading:
 - Column package should be lifted using a fork truck under the bottom wooden cross beams.
 - You also can hook into hole on steel plate to lift the individual column by chains.
 - Carefully unload the lift. Do not get heavy shocks onto the lift.
3. Remove packing and protective wrapping.
4. Adjust rear wheel jack at each column:

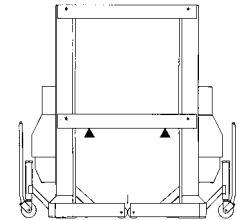


fig.1

- Remove fixing of rubber wheel. Screw-down M20-bolt clockwise to raise the column. Ground clearance is determined by how far the bolt is turned. If column is loaded it will automatically be lowered by spring compression. Adjust ground clearance as minimum as necessary in order to prevent cables to go underneath of column's frame. Always take care column will lower totally to the ground when being loaded.

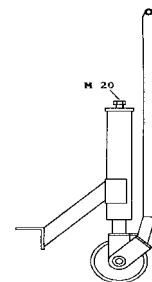


fig.2

5. Check oil level in oil tank of each column: Remove cover panel of power unit. Remove oil gage and check oil level. If necessary, fill with hydraulic oil ISO32 (SAE10). (See Maintenance and Service Instructions).

ELECTRICAL SUPPLY

IMPORTANT: This lift is wired and adjusted to operate at 400 volts/50Hz

If this does not match your facilities voltage, **STOP**; change motor wiring and transformer jumpers as shown. Incorrect voltages may cause internal, irreparable electrical damage.

IMPORTANT: Use a separate circuit for each lift. Size circuit breaker, receptacle and plug based on the chart below. Wiring shall comply with all local electrical codes.

Electrical Requirements			
Lift Model	Electrical Service		Fuses on Site
EHB707-4	400V, 3Ph., 50Hz.		16 Amp.
EHB707-6	400V, 3Ph., 50Hz.		16 Amp
Voltage:	400V, 3 ph., PE Ground / clockwise rotation of motor required!		
Phases, power cores	L1 (black), L2 (brown), L3 (blue), Ground (yellow green)		
Frequency:	50 Hz.		

IMPORTANT: If facilities voltage is not listed, **STOP**; consult the factory. Other voltages may cause internal, irreparable electrical damage. Select the appropriate receptacle and install in a suitable wall-mounted box near the lift's operation area. Install plug on lift's power cord.

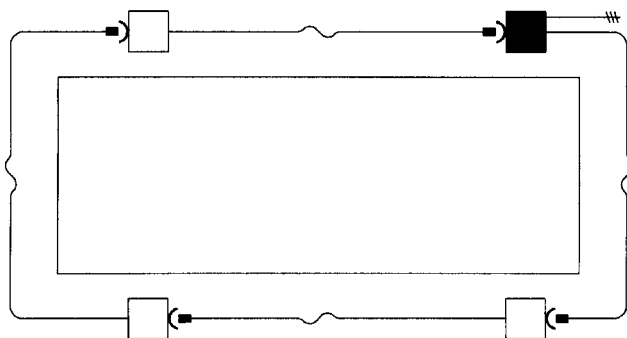
ELECTRICAL CONNECTION

NOTE: The lift may only be connected with a appropriate power supply outlet which is installed as prescribed and earthed as per local safety regulations and which is incorporated in a protective circuit. Electrical connections have to be done by an expert.

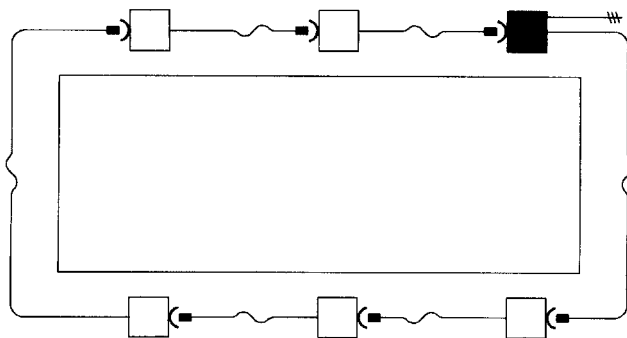
1. Connect interconnect cables from column to column, in a circuit around the vehicle. See **fig.3**. Lock each socket with the plug locks provided. Plug power cord on master column into the appropriate power supply outlet.
2. Before operating the lift it should be checked for functionality first, without load. When operating the lift, regard the Detailed Operation Instruction enclosed.
3. If lift does not begin to raise after 10 seconds of depressing the UP button, you need to stop and check motor rotation. Clockwise rotation of motor is required. Rotation of the motor can be changed. Disconnect the power cord from the power supply outlet. Remove the plug on power cord and rewire the plug by changing two phases (L1/L2).

NOTE: Do not change the wiring within the lift system or control panel. The motor rotation may be different if the lift is operated at a different location.

CONNECTING OF COLUMNS



Master Column
(can be positioned at any convenient location)



Master Column
(can be positioned at any convenient location)

fig.3

REGISTER FOR MOBILE COLUMN LIFT

1. GENERAL INFORMATION

manufacturer: FINKBEINER-Lifting Systems
Walter Finkbeiner GmbH
Alte Poststrasse 9 / 11
D-72250 Freudenstadt / Germany

decription: Portable, electro-hydraulic lifting columns to lift vehicles at the tires

type: EHB707V11-4 (1 master / 3 slave columns, adjustable support forks)
EHB707V11-6 (1 master / 5 slave columns, adjustable support forks)

lifting capacity: EHB707V11-4: 4 x 7200 kgs = 28800 kgs
EHB707V11-6: 6 x 7200 kgs = 43200 kgs

arranged for working underneath load pick-up attachment - yes

2. ADDITIONAL GENERAL INFORMATION

admissible static lateral pressure at working platform: 1000 N
admissible dynamic pressure on the windward side
of the lifted vehicle: 100 N/m²

3. CONTROL

Integrated master/slave control panels at lifting columns. Standard control of master column suitable for common operation of up to 6 columns. Synchronizing compensation with safety control system, tolerance for control height difference between column is approx. 3 mm. Control mounted on printed circuit boards, plugable and easy to exchange.

4. LIFTING / LOWERING SPEED

lifting respective lowering speed: approx. 0.80 m/min = 0,0133 m/sec.

5. DRIVE, ELECTRO-HYDRAULIC

electric motor 1.1KW, 400V, 3 Ph/PE, 50 Hz
hydraulic pump gear pump 2.2 ccm/rev.
operating pressure = 240 bar, pressure relief valve = 240 bar
admissible range of temperature of hydraulic oil: -10° to + 50° C

6. SUPPORTING MEANS

hydraulic cylinder, directly and single acting, D 90/70 mm, stroke = 1700 mm

7. LOAD PICK-UP ATTACHMENT

EHB707V11: adjustable support forks for tire sizes from 155R13 to 12.00-20 resp. 155R13 to 13R22.5, tire diameters from 550 to 1140 mm, length 300 mm

8. COLUMN

dimensions: 1160 x 1100 x 2250 mm
weight: 580 kgs

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OPERATOR'S MANUAL FOR MOBILE COLUMN LIFT TYPE EHB**

9. ELECTRIC EQUIPMENT

operating voltage:	3 x 400 V, 50 Hz /PE
control voltage:	24 V DC
type of protection:	IP 65, protection class 1.
admissible range of temperature for control:	-10° to +60° C
lifting equipment suitable for use in:	- open air - wet and humid rooms

IMPORTANT: lifting equipment must not be used at explosion proof areas!

10. PAINT COAT

final coat (powder paint)	RAL 2004, orange - lift column
	RAL 7043, grey - lift carriage

11. SAFETY EQUIPMENT

ELECTRICS

- synchronism-regulation for absolut synchron run of all columns
- safety control system for supervision of all operating functions
- lockable main switch
- emergency stop at each column
- control voltage 24 V DC
- automatic motor protection at each column

HYDRAULICS

- overload protection by pressure relief valve
- load securing by check valve

MECHANICS

- automatical mechanical locking device
- overload protection of travelling device by spring deflection, with adjustable ground clearance
- locking frame at rear wheel

12. SAFETY REGULATIONS

The lift has been designed according to following safety instructions:

- UVV-VBG14 und EN1493
- 89/392/EWG in connection with 91/368/EWG and 93/44/EWG
- 73/23/EWG EG-low voltage safety regulations
- 89/336/EWG EG-regulation of electromagnetic compliance EMV

CE-conformity certificate of the manufacturer is enclosed to this manual.

The appropriate local safety regulation of the respective country in which the lift is used are valid furtheron. Within the EU following regulations for the user are valid:

- 89/391/EWG
- 89/654/EWG
- 89/655/EWG
- 89/656/EWG
- 92/58/ EWG

**WALTER FINKBEINER GMBH
D – 72550 FREUDENSTADT**

SAFETY INSTRUCTIONS

- **Daily inspect** your lift. Never operate it if malfunctions or if it has broken or damaged parts.
- **Use only** qualified lift service personnel and genuine FINKBEINER parts to make repairs.
- **Thoroughly train** all employees in use and care of lift, using manufacturer's instructions supplied with the lift.
- **Never allow** unauthorized or untrained persons to position vehicle / lift or operate lift.
- **Prohibit** unauthorized persons from being in shop area while lift is in use.
- **Do not permit** anyone on lift or inside vehicle when it is either being raised or lowered.
- **Always keep** area around lift free of tools, debris, grease and oil.
- **Never overload** lift. Capacity of lift is shown on nameplate affixed to the lift.
- **Do not hit** or run over lift forks or base. This could damage lift or vehicle. Before driving vehicle into area, position lift units to provide unobstructed entrance onto lift area.
- **Do not block**, open or override self-closing lift controls, they are designed to return to the OFF or neutral position when released.
- **Remain** clear of lift and vehicle when lowering.
- **Avoid** excessive rocking of vehicle while on lift.
- **Clear** area if vehicle is in danger of falling.
- **Position** lift columns to provide an unobstructed exit before removing vehicle from lift area.
- **Do not perform** any maintenance on the control panels until the power has been shut off to the lift.

SHORT OPERATING INSTRUCTIONS

INSTALLATION

- Locate lift columns on a level and sufficient load-bearing surface.
- Lift columns should be placed at the tires advised by the vehicle's manufacturer, equidistant from tire's centerline, 2 lifting columns at one common axle.
- Position the support forks of lift as far as possible under the vehicle tires to fully contact the tires.
- Sufficient safety clearance between vehicle body and lift column has to be maintained.
- Pay attention to required size of tyres 155R13 to 13R22.5 (diameter 550-1140 mm). Adjust both forks as narrow as possible underneath the tire. Both forks must be equidistant from lift's centerline. Always secure forks with pin.
- Plug together lift columns by interconnect cables from column to column, in a circuit around the vehicle. Plug into the power supply outlet.

OPERATION - PERFORMANCE

- Operation by persons only who are 18 years of age and who have been instructed in the handling of the lift.
- Switch-on main switch at Master Column. Press CONTROL ON - button. The **green** CONTROL-ON lamp illuminates.
- Select operation mode SINGLE/ALL at Master Column. The **red** lamp is illuminated at SINGLE.
- The lift can be raised / lowered directly at each column by pressing UP / DOWN, with SINGLE and ALL-mode.
- Operation ALL is only possible when the **green** lamp (common cycle) is illuminated. For that **all yellow** or **all blue** lamps of the columns must be illuminated.
- If no **green** lamp (common cycle) is illuminated adjust each column in SINGLE-mode.

OPERATION

- Never overload the lift. Capacity is maximum 7200 kgs per column.
- Load vehicle on lift carefully. Raise lift until tires are clear from the floor. Check secure and correct contact of support forks with vehicle tires.
- Inclined raising / lowering of the vehicle is not allowed.
- Regard not to stand under the lift or under the load during raising / lowering movement and observe sufficient safety clearance towards the moving parts of the lift.
- Pay attention that the movement area of the lift is free from any obstacles and that no persons stay therein.
- Constantly supervise the lift and the lifted vehicle and stop operation immediately by pressing the emergency-stop button if anything is working not correctly.
- After finishing lifting or lowering, main switch has to be switched-off and locked against unauthorised use.
- The Detailed Operating and Maintenance Instructions have to be observed (see lift manual).

DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS

COMMISSIONING

RANGE OF APPLICATION

- The Mobile Column Lift is suitable only for lifting commercial vehicles at the tires respectively with additional traverses directly at the chassis.
- Do not exceed admissible capacity of the lift.
- Do not use the lift in fire hazard rooms nor in explosion-proof areas.

INSTALLATION

- Regard enclosed Set-Up Instructions.
- Locate the lift columns vertically on a smooth, level and sufficient load-bearing surface. Admissible slope of ground is 1°. For ground surface preferably concrete of quality minimum B20 is required. Maximal pressure of wheels on floor = 200 kgs/cm².
- Master column with power supply cord has to be located towards the vehicle at any location. All other slave columns are interchangeable. See **fig.3**. Maximum 5 slave columns can be connected with 1 master column.
- Lift columns have to be located at the tires advised by vehicles' manufacturer to be lifted, exactly towards the centerline of the tire, 2 lift columns at one common axle.
- Move in lift columns as far as possible under the vehicle tires. The front face of the support carriage should touch the outside of the tire.

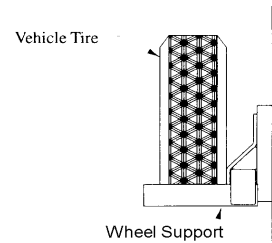


fig.4

- For lifting of vehicles with double axles, please see instructions of the vehicle's manufacturer.
- Lifting of vehicles at the frame with additional traverses only at safe and advised lifting points.
- Sufficient safety clearance between the vehicle body and the lift column at the top has to be maintained.
- Mind sufficient clearance of the front face of the support carriage to the vehicle's tire rims.
- EHB707V11 with adjustable forks: Pay attention to required size of tires 155R13 to 13R22.5 (diameter 550-1140 mm). Adjust both forks as narrow as possible underneath the tire. Both forks must be equidistant from lift's centerline. Always secure forks with pin. No adaptors required.
- Plug together lift columns by interconnect cables from column to column, in a circuit around the vehicle. Lock plugs with the socket locks provided. Plug power cord with plug into appropriate power supply outlet. **IMPORTANT:** The outlet must be wired with the correct polarity. Clockwise rotation of motor is required.
- Keep feet clear of lift frame while the travelling device of column is lowered.

REQUIREMENTS FOR OPERATING PERSONS

Operation by persons only who are 18 years of age and who have been instructed in the handling of the lift.

PRE-OPERATIONAL CHECKS

Before commencing operations, the lift operator or other competent person shall carry out routine checks in accordance with the operation instructions, which shall be sufficient to ensure the safe operation of the lift.

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OPERATOR'S MANUAL FOR MOBILE COLUMN LIFT TYPE EHB

PERFORMANCE

OPERATION

- Switch-on main switch on Master Column control panel. Press CONTROL ON - push button, **green** CONTROL-ON lamp illuminates.
- Select operation mode at SELECTOR SWITCH at Master Column: SINGLE / ALL.
- At SINGLE mode, raising and lowering can be performed from any column by pressing the respective push-button UP / DOWN. When operating several lifting columns simultaneously, no different ways of movement are possible at one time. Only the movement of the push-button, that was pressed first, will be carried out.
- Operation mode is shown by **red** blinking lamp at each column: ON = SINGLE, OFF = ALL operation.
- Operation mode SINGLE / ALL is possible from any column, UP / DOWN.
- EMERGENCY-STOP push button at each column switches off immediately the complete lift. **NOTE:** when the button is pushed it is locked in the off-position. For re-operating the lift release EMERGENCY STOP push-buttons.
- Operation mode ALL is only possible when the **green** lamp (COMMON CYCLE) is illuminated. For that all yellow or all blue lamps of the columns must be illuminated.
- If no **green** lamp (COMMON CYCLE) is illuminated adjust each column in SINGLE-mode to get common cycle (same colour, all yellow or all blue required!) at all columns. To level the individual columns compare height indicator at the columns. Do not get vehicle inclined.

LOAD PICK-UP

- Never overload the lift. Capacity is shown on decals and nameplate affixed to the lift.
- Regard the vehicle individual axle weight does not exceed two lift columns combined capacity.
- Regard total mass and mass distribution of the vehicle, including all loads in/on the vehicle.
- Regard external forces to be applied to the vehicle while effecting repairs and alterations.
- If load on column gets too heavy the pressure relief valve prevents further lifting.
- Position lift forks to fully and secure contact the vehicle tires.
- Release parking break of vehicle.
- Load the column support forks equally. Lifting with only one fork tine is not allowed.
- Raise lift until tires are clear from the floor. Check safe and correct contact of support forks with vehicle tires.

TO BE OBSERVED FOR OPERATION

- Inclined and one-side lifting respective lowering of vehicles. **ATTENTION:** at SINGLE operation mode, vehicle can get to a dangerous inclined position.
- Regard that when releasing push-button UP / DOWN at operation mode ALL, movement will not be interrupted before all lift columns are in common cycle.
- While operating the lift, you will observe the columns stopping and starting at various stages of travel for automatic regulation the speed of the individual columns. This is a normal characteristic of the lift remaining level during the movement.
- The operating person must keep out of operation range of lift when lift being in action and has to observe sufficient clearance towards the moving parts of the lift.
- The operating person has to pay attention that the movement area of the lift is free from any obstacles and that no persons stay therein. Before lowering remove all obstructions as tool trays, support stands, electrical cables etc. from area underneath the vehicle.
- Close doors of vehicle before lowering so that they can not hit lift columns.

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OPERATOR'S MANUAL FOR MOBILE COLUMN LIFT TYPE EHB

- Adequate overhead clearance is required to raise the vehicle to the desired height. Observe also the lift carriage moving upwards beyond the column when raising.
- The operating person has to supervise constantly the lift and the lifted load and has to stop operation immediately by pressing emergency-stop if anything is working not correctly.
- It is not allowed to ride in/on the lifted vehicle or on the lift carriage during raising or lowering.
- While using the lift avoid excessive rocking of vehicle while on the lift.
- The motion of the lift shall not be used for the fitting or removal of motors, gearboxes, springs or other components to or from vehicles.
- Do not start the engine of a lifted vehicle or allow to continue running.
- Do not move the column lift when it is loaded.
- Do not drive with vehicle over the columns' legs.
- The column lift shall not be used to transport loads.
- Regard lifted vehicle can not get into a inclined side position due to possible leakage in vehicles' air-suspension-system at one side and hereby will be damage by lift column.
- In the event that strong wind at outdoor use arise, the vehicle immediately must be lowered to the ground.
- After finishing raising or lowering, the main switch has to be switched off and locked against unauthorised use.
- In the event of a lift breakdown do not use the lift until adjusted or repairs are made by qualified lift service personnel. Secure lift against unauthorised use.

FURTHER SECURITY INSTRUCTIONS

- Never lock control buttons in activated position.
- It is not allowed to change manufacturer's adjustments of hydraulics or electrics.
- Electric control panels may not be opened by unauthorised persons. Open only when lifting equipment is disconnected from currency. When the Control-On lamp is out, the panel still could be electrically charged.
- Furtheron the operating regulations have to be noted as per the safety regulations for the prevention of accidents of the respective country.

PREVENTION OF POSSIBLE BREAKDOWNS

- Protect plug and socket connections against wetness and dirt. Insert and lock plugs into their own socket at the various lift columns as far as they are not connected with each other.
- Do no buckle or place heavy sharp objects on interconnect cables, do not drive vehicle over cables.
- Mind cables won't get underneath the columns frame and squeezed/damaged when rear travelling device is lowered.
- Always keep electrical control panels firmly closed and sealed.
- Always keep lift and lift area clean.
- Always keep all bolts tight.
- Do not direct stream water directly onto control box or cable connections.
- Always keep switch cam for synchronization at lift carriage clean, do not damage it.
- Always keep locking latch of mechanical locking device free.
- Do not expose the lift and cables to chemicals and other caustic materials
- Do not get heavy shocks on the lift.
- Do not expose the lift to fire, blowpipe, do not weld at the lift.

GENERAL REGULATIONS

LIFT SITING

Particular attention shall be given to the following lift siting factors as applicable:

- building of housing requirements, including headroom clearances
- access, egress and working clearances
- environmental factors (e.g. fumes, impact on surrounding amenities, impact from adjacent activities, rustproof pray, abrasive blasting)
- wind loading, including funnelling effects and necessity for shelter
- assurance that the area proposed for standing the lift is fit for purpose intended, e.g. that the concrete foundation is suitable in strength, thickness and reinforcement to withstand the loading
- access of unauthorized persons

MANAGEMENT'S RESPONSIBILITIES

Management shall ensure that:

- all persons involved in the operation, inspection and maintenance of the lift are adequately qualified and that they are trained in the safe use and operation of the lift using the manufacturer's lift manual and have the necessary physical and other attributes to operate it.
- ensure that the lift operators
- the designated operator(s) is (are) authorized to operate the lift.
- manuals applicable to the lift are available to operators and maintenance personnel, together with managements's instructions.
- records of the significant events concerning the safety and operation of the lift are supplied, maintained, retained and supervised.
- operational and safety checklists as recommended by the manufacturer are provided to the operator and complied with.
- inspection and maintenance are carried out in conformance with the manufacturers's or competent person's recommendations prior to initial and each subsequent use.
- the periodic inspection and maintenance records will be maintained.
- competent personnel are available to provide guidance on those factors which impact on the operation of the lift
- vehicle lifts that are not in a safe condition are immediately removed from service until repaired.
- necessary lockout/tagout means for energy sources are provided before beginning any lift repairs.
- the rated capacity and loading conditions are not exceeded.
- the operator is trained in the correct load distribution limitations of lift.
- procedures are established to deal with reasonable foreseeable emergency situations and that all personnel are fully trained in their application.
- the lift will not be modified in any manner without the prior written consent of the manufacturer.

OPERATOR'S RESPONSIBILITIES

The operator's responsibilities shall include the following:

- understanding the operating instructions and emergency procedures for vehicle lifts.
- ensuring that the lift is used in compliance with managements's instructions.
- avoiding unnecessary operation of the lift and motion limits.
- ensuring that all discrepancies and malfunctions are reported and properly recorded.
- checking the operational area for hazards.
- ensuring that the rated capacity of the lift is not exceeded

MAINTENANCE AND SERVICE INSTRUCTIONS

General

The required periodical safety inspections have to be performed in accordance with the safety regulations of the respective country in which the lift is used.

The management shall establish a preventive maintenance program giving consideration to the manufacturer's recommendations. It shall be based on the working environment and the frequency and severity of use of the lift to ensure the lift is kept in safe and satisfactory condition.

To avoid personal injury permit only qualified personnel to perform maintenance on this equipment.

Note: Pre-operational inspections may be carried out by the operator of the lift

All safety related malfunctions and problems shall be corrected before the lift is returned to service.

Pre-operation inspection

Before use at the commencement of each working shift, the lift shall be given a visual inspection and functional test including, but not necessarily limited to, the following:

- operating controls and emergency and safety devices
- visual check of the structure
- hydraulic system leaks
- loose and missing parts
- decals, warnings and operating manual
- access and clearance provisions
- guarding correctly fitted

All safety related problems shall be rectified prior to using the lift.

Routine inspection and maintenance

to be carried out at intervals of maximum 3 months unless the lift is not in service. The inspection should include, but not necessarily limited to, the following:

Inspection every 3 months:

- Check all operative functions of lift, check control lamps.
- Check function of mechanical locking device.
- Check function of emergency stops: push the emergency stop button. None of the columns should operate.
- Visual check of electric cables: Check the condition of the power supply cable and the interconnect cables from each lift. Replace worn or broken cables as required. Check plugs and sockets.
- Visual check of structural components including welding and other critical components such as pins, shafts etc.
- Check of hydraulic system leaks.
- Decals, warnings and control markings.

Lubrication every 3 months:

- Grease carriage rollers and flat spring of locking brake on wheel jack, with multi-purpose grease, type G2 or approved equal -> see lubrication chart **fig. 5**.
Carriage must be raised until hole on column aligns with grease fitting of carriage roller.
- Check oil level in oil tank:
Lower the lift. Remove cover panel of power unit. Remove oil gage and check oil level. If necessary, fill with hydraulic oil.
Bottom mark of oil gage = admissible minimum level / top mark = admissible maximum level.

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Annual inspections

An annual inspection including a routine maintenance inspection shall be carried out one year when the lift was first placed in service or from the last annual inspection. The following shall be considered :

- operational load test with nominal load
- detailed inspection of all structural and wear components
- check of corrosion
- non-destructive inspection of critical areas for evidence of cracking

Maintenance every 3 years

Change Fluid:

- Column must be completely lowered.
- Remove cover panel of power unit.
- Remove drain plug at bottom of oil tank and collect oil until tank is empty.
- Replace drain plug and refill tank.

Type of hydraulic oil required: ISO32 (SAE10), 8 ltr. per column.

Temperature range: -10° to +50° C. In case of different temperatures, regard viscosity of oil.

- Check oil level with oil gage.
- Disposal of waste oil according to legal regulations
- **NOTE:** Keep hydraulic system clean. Use only appropriate and clean oil. No dirt of water must get into hydraulic circuit.

Lubrication Chart

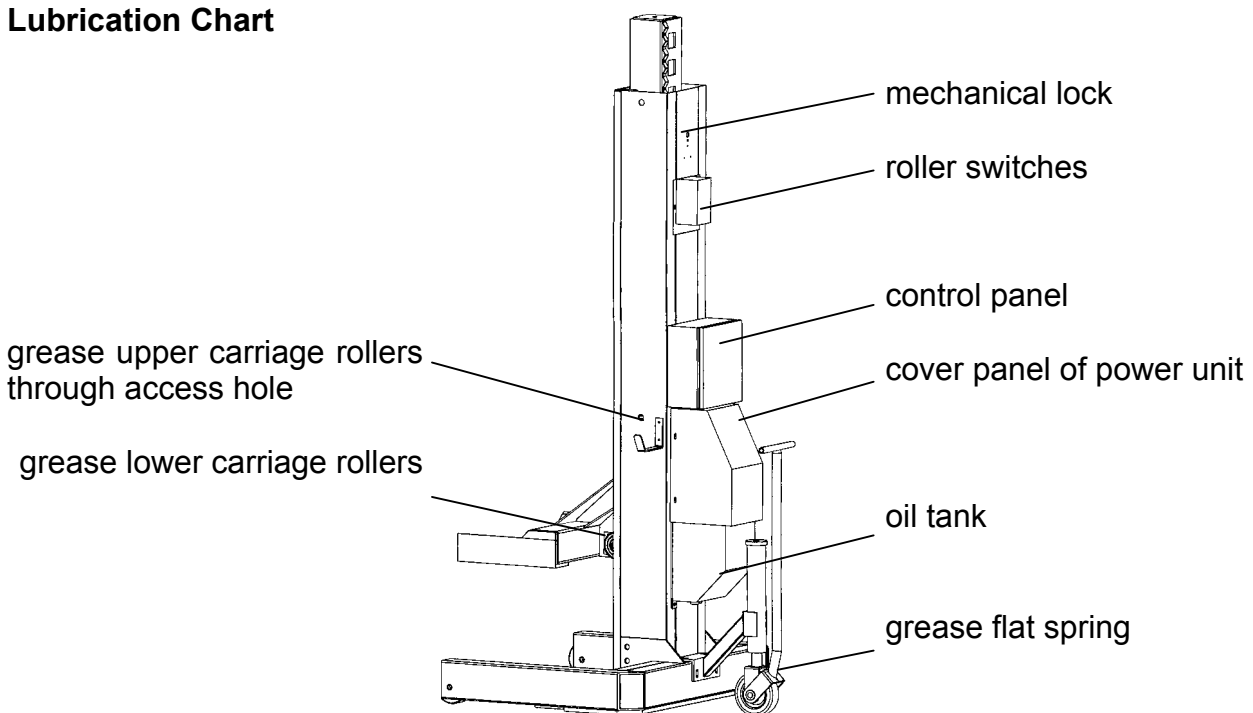


fig.5

Major inspection for assessment of suitability for continued safe operation

The lift should be subjected to a major inspection after 10 years of service or at a lesser period as recommended by a competent person based on an assessment made on the history of the lift, its condition and its working environment. The purpose of the inspection is to assess the suitability of the lift for continued safe operation.

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Consideration shall be given to:

- actual past usage of the lift
- the current condition of the lift
- anticipated future usage for the lift
- the capacity and viability of upgrading the lift to the requirements of the latest Standards for the lift
- manufacturer's safety upgrades

Repair

Any part of the lift, or its ancillary or auxiliary equipment which becomes so worn or unserviceable as to constitute a hazard or impairs the operation of the lift or may constitute a hazard before the next periodic inspection, shall be repaired or replaced. The repaired or new part shall comply with the manufacturer's recommendations or specification.

Records

A continuous working record of the significant events concerning safety and operation of the lift shall be kept and be readily available.

The operator or other person responsible shall record the checks, adjustments, renewals of parts, repairs and inspections performed and all irregularities or damage concerning the safe use of the lift.

TROUBLE SHOOTING

Trouble	Possible Cause	Remedy
After pressing CONTROL ON - button, green CONTROL ON - lamp does not illuminate, lift can not be started.	Emergency-stop button locked at any column.	Unlock emergency-stop button
	Plug and socket connections not plugged in correctly.	Plug in all cable connections correctly, circuit must be closed.
	No line voltage or low supply voltage.	Check power supply at user's site for tripped circuit breaker.
	Interconnect cable is damaged.	Replace cable.
After pressing CONTROL ON -button, CONTROL ON - lamp illuminates, but not green COMMON CYCLE - lamp, lifting/lowering only possible with operation SINGLE.	Lift columns are not in common control cycle. (common cyle = cycle lamps of all columns are illuminated in same colour, all yellow or all blue)	Re-establish common control-cycle at each column with operation SINGLE until lamps are all yellow or all blue and green COMMON CYCLE - lamp at master column illuminates.
After pressing CONTROL ON -button, CONTROL ON - lamp and COMMON CYCLE - lamp illuminate, motors turn but no lifting is possible.	Motor rotation incorrect.	Change phase rotation, clockwise rotation required! (see set-up instructions)
Lifting only until tires clear from floor.	One or more columns are overloaded. Vehicle too heavy.	Regard admissible capacity of lift.
After pressing CONTROL ON -button, CONTROL ON - lamp and COMMON CYCLE - lamp illuminate, but no lowering is possible.	Carriage has lowered slightly, mechanical lock engaged.	Lift UP until mechanical lock is disengaged.
When moving DOWN, load pick-up can not be lowered to bottom position.	Carriage clings to tire.	Free tire from carriage. Use suitable wheel adaptors for smaller tires or place adjustable forks more narrow towards the tire.
Lift does not operate after observing the above mentioned points.	Inoperative electric controls. Faulty motor.	See following pages. Repairs by qualified lift service personnel.

DETAILED TROUBLE SHOOTING FOR REPAIR

Locating defective lift column

If columns are loaded, select single operation and attempt lowering. If not successful, refer to Emergency Lowering Instructions. If vehicle is lowered, proceed step by step as noted below with unloaded lift.

1. Check master column only:

- a) Plug in master column control cable into its own socket.
- b) Check all functions on master column in SINGLE and ALL mode:
 - If master column is operative, -> go to step 2.
 - If not successful, -> go to step 3.

2. Check master column together with slave column:

- a) Connect one slave column together with master column. Circuit of interconnect cables must be closed. Check all functions.
- b) If one slave column is operative, proceed checking the remaining slave columns until defective column is located.
- c) After locating the defective slave column, -> go to step 4.

Locating failures on lift column

-> See electric wiring diagram and drawing of mechanical parts enclosed.

WARNING!

Use extreme caution when working inside the control panels. Some of the components are electrically „allive“ whenever the panel is plugged into the power source and main switch is on.

3. Check master column: (control cable plugged into it's own socket)

- a) Check correct power supply, voltage and all phases. Check fuses at users site.
- b) Check fuses inside master control panel and on master circuit control board.
- c) Check power cord with power plug and interconnect control cable with plug connections.
- d) If master column does not work in SINGLE operation mode:
 - check if roller switches are free (-> see step 5.)
 - check cable to solenoid Y3 of mechanical lock
 - replace slave control board
 - replace master control board
- e) If master column does not work in COMMON operation:
 - replace slave control board
 - check roller switches (-> see step 5.)
 - replace master control board

4. Check slave column: (connected together with master column)

- a) Remove slave control board out of the defective column and plug-in slave control board of a fully working column for exchange.
- b) If slave column is operative, the exchanged slave control board is defective. Replace it.
- c) If slave column not operative:
 - check interconnect cable and plug connections
 - check roller switches (-> see step 5.)
 - check cable to solenoid Y3 of mechanical lock

**Walter Finkbeiner GmbH, Alte Poststrasse 9 / 11, D - 72250 Freudenstadt
OPERATOR'S MANUAL FOR MOBILE COLUMN LIFT TYPE EHB**

5. Check of roller limit switch / switch cam:

If cycles with the corresponding control lamps (yellow/blue) do not act regularly through while lifting/lowering and are interrupted, check as follows:

- Roller switches located above control panel: Remove cover panel. Check continuity of the two switches, on- and off- impulses of switches must be regular (control cycle lamps yellow and blue should be on/off regular, upper switch for yellow cycle lamp, bottom switch for blue cycle lamp). Slightly pull at cable and see if switches move freely. Rollers and rams on switches should move freely. If necessary, clean and lubricate with a light machine oil.
- Adjustment of roller switches: at top and bottom position of carriage the upper switch must be engaged at tip of switch cam and yellow lamp must be illuminated.
- Check switch cams of carriage where roller switches ride on: Look for any bent or twisted cams. All cams should be spaced uniform and straight. Fixing screws must be tight.

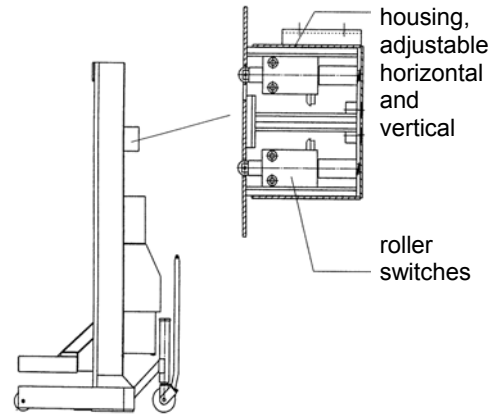


fig.6

EMERGENCY LOWERING INSTRUCTIONS

WARNING!

- In case of breakdown, do only lower the lift.
- While lowering, pay attention that vehicle does not move into a inclined position.
- Lower columns equally.
- Do not stay underneath the load or in the operation area of the lift columns.
- Pay attention nobody and no obstacles are underneath the load.

Emergency lowering in single operation, power on

1. Normally SINGLE operation mode is still possible even if ALL operation is not working.
2. Lower each lift carriage a small increment at a time keeping the vehicle level.

Emergency lowering at no power

1. Remove cover panel of hydraulic power units
2. Keep mechanical locks open. Use screw M6 (fixed at power unit) to screw into lock latch, pull back and keep open by plastic slide. Access through rear hole at top of column. After lowering remove screw M6. If mechanical lock is engaged, slightly lift carriage until lock is free.
3. Loosen lock nut of emergency lowering screw (2.11) at valve housing of power unit (M8, size 13 mm).
4. Carefully turn emergency lowering screw counter clockwise about $\frac{1}{2}$ to 1 turn. Carriage will begin lowering.
5. Turning the emergency lowering screw clockwise, the downward movement will stop.
6. Lower each carriage a small increment at a time keeping the vehicle level.
7. After lowering is finished, close and tighten all emergency lowering screws. Tighten lock nuts.
8. After lowering do not use the lift until adjusted or repairs are made by qualified lift service personnel. Secure lift against unauthorised use.

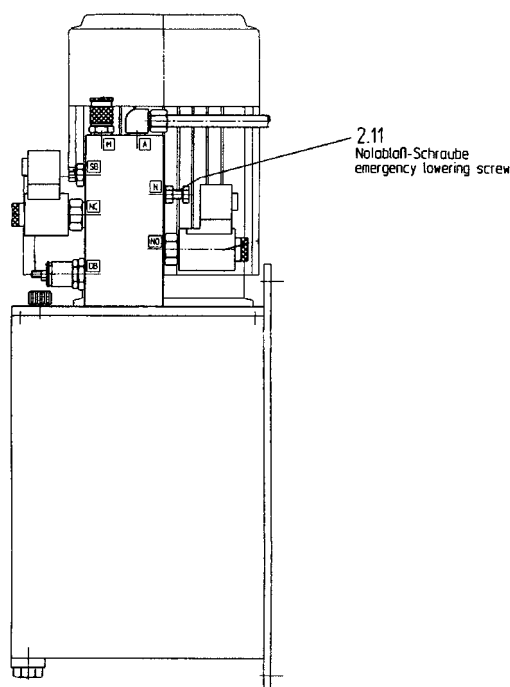


fig. 7: POWER UNIT

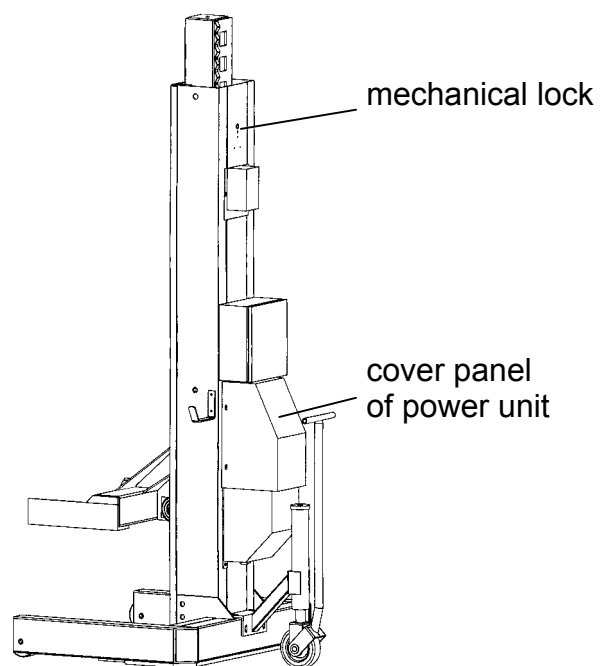
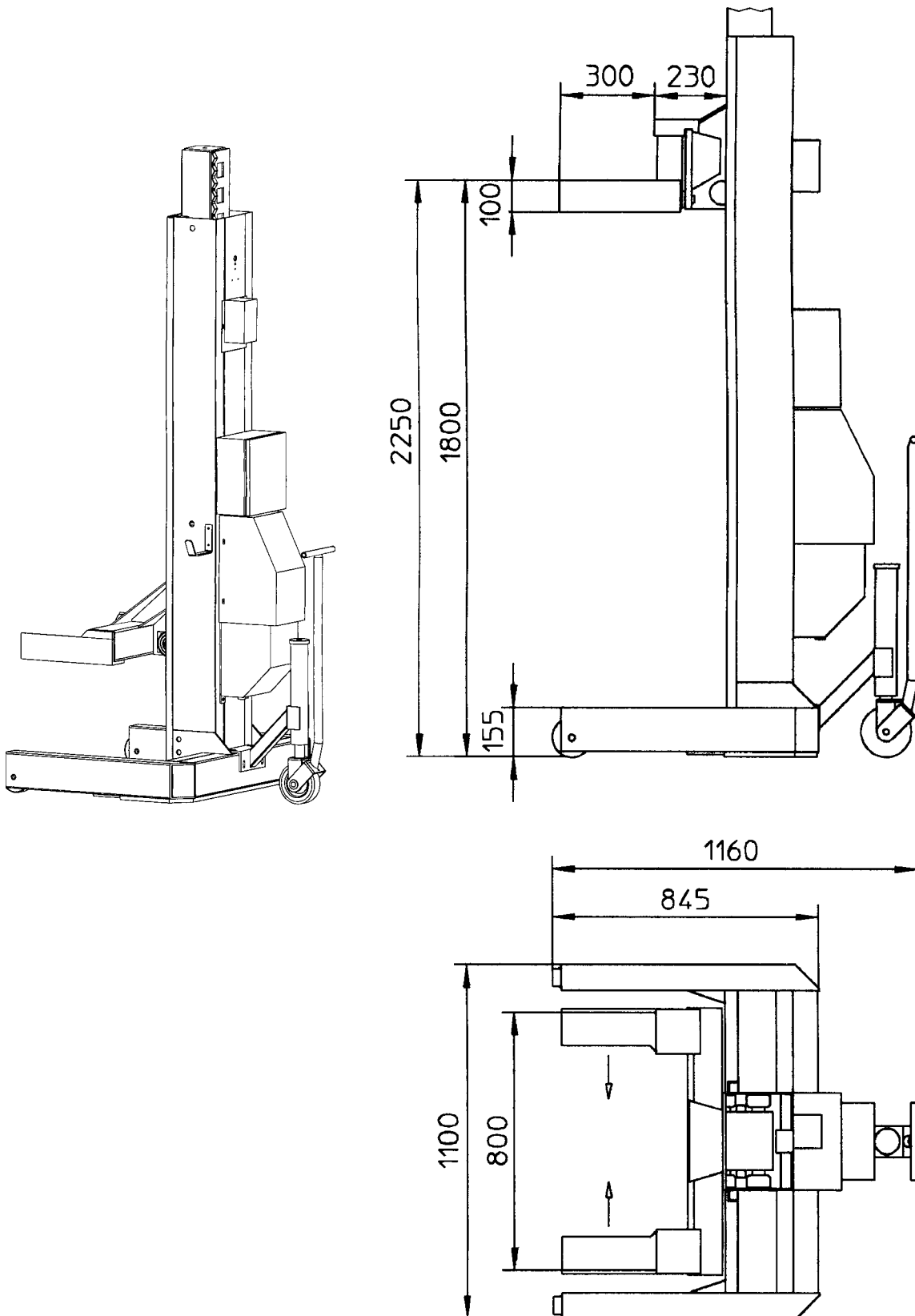


fig. 8

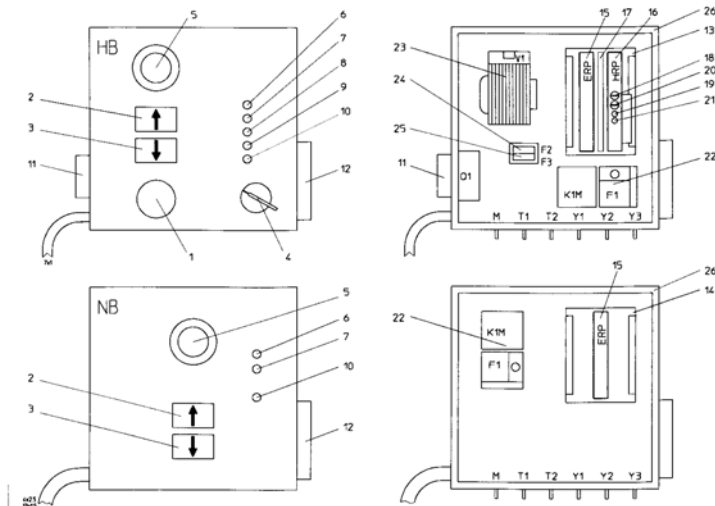
GENERAL DRAWING OF COLUMN

Column Lift EHB707V11



ELECTRIC COMPONENTS

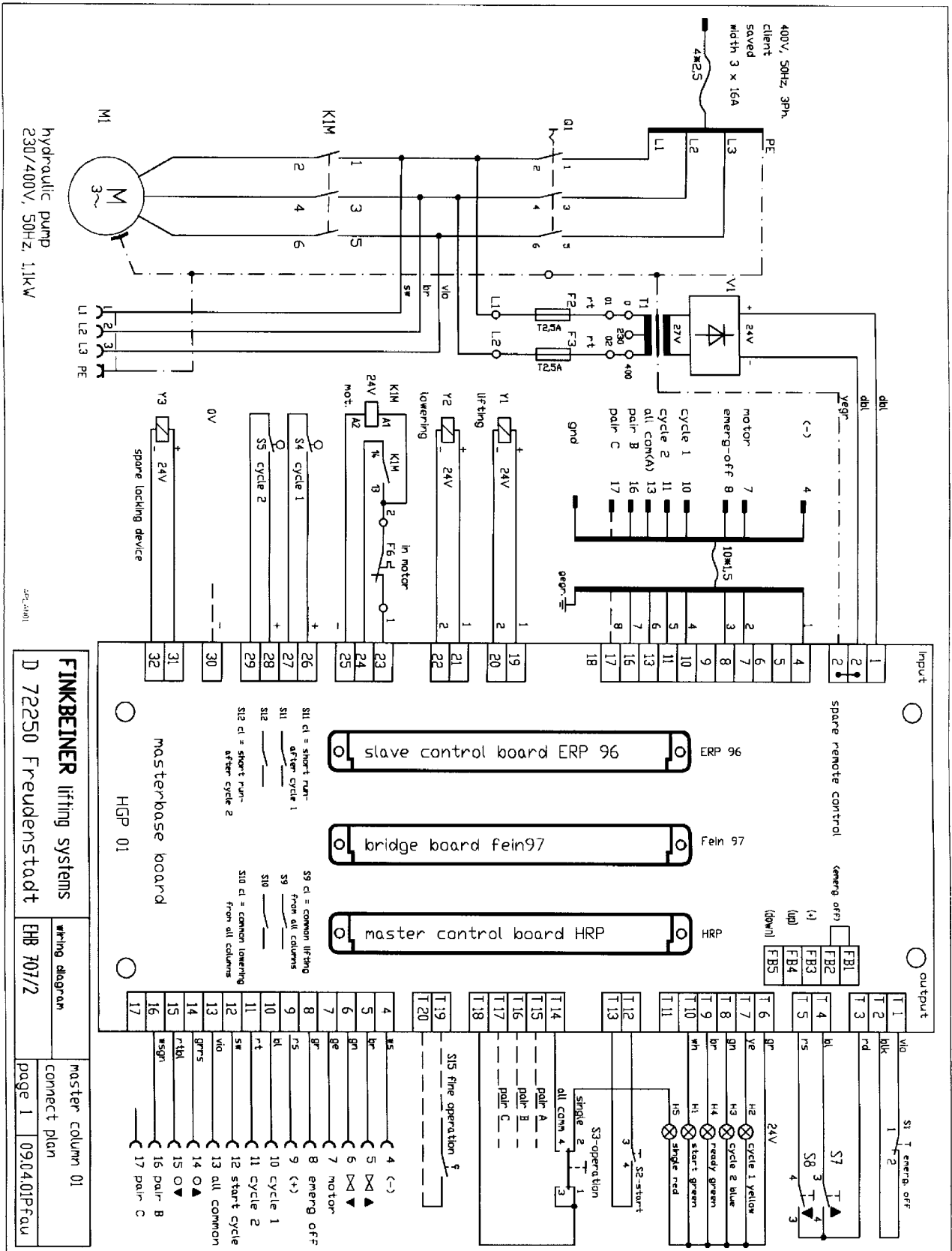
MASTER CONTROL PANEL



SLAVE CONTROL PANEL

pos.	description
1	Push button CONTROL ON, control voltage ON
2	Push button LIFTING
3	Push button LOWERING
4	Selection switch SINGLE / COMMON operation mode
5	EMERGENCY STOP, lockable
6	Control LED lamp YELLOW, synchronism cycle 1
7	Control LED lamp BLUE, synchronism cycle 2
8	Control LED lamp GREEN, COMMON CYCLE
9	Control LED lamp GREEN, CONTROL ON
10	Control LED-lamp RED, on = single, off = common operation
11	Main disconnect switch, lockable
12	Socket 16 poles
13	Master base board HGP01
14	Slave base board EGP99
15	Slave control board ERP96, plugable
16	Master control board HRP99-light, plugable
17	Control bridge board FEIN98BR
18	Fuse F7 on master control board
19	Control LED-lamp (green) on master control board for fuse F7
20	Fuse F8 on master control board
21	Control LED-lamp (yellow) on master control board for fuse F8
22	Motor relais K1M
23	Transformer T1, 400 V / 24 V DC, with rectifyer V1
24	Fuse F2 for transformer, control currency
25	Fuse F3 for transformer, control currency
26	Fuse F4 for supply current
27	Fuse F5 for supply current
28	Fuse F6 for supply current
29	Control box 300 x 300 x 150 mm
30	Control cable – slave column, 15 x 1.5 + 5 x 2.5 – 10m with plug 16 poles
31	Power supply cable – master column, 4 x 2.5-10m, rubber
32	Control cable – master column,10 x 1 – 10m with plug 16 poles
M	Cable 4 x 1.5 to electric motor
T1	Cable 3 x 1 to switch S1, cycle 1 (yellow)
T2	Cable 3 x 1 to switch S2, cycle 2 (blew)
Y1	Cable 2 x 1 to solenoid valve lifting
Y2	Cable 2 x 1 to solenoid valve lowering
Y3	Cable 2 x 1 to solenoid of mechanical locking device

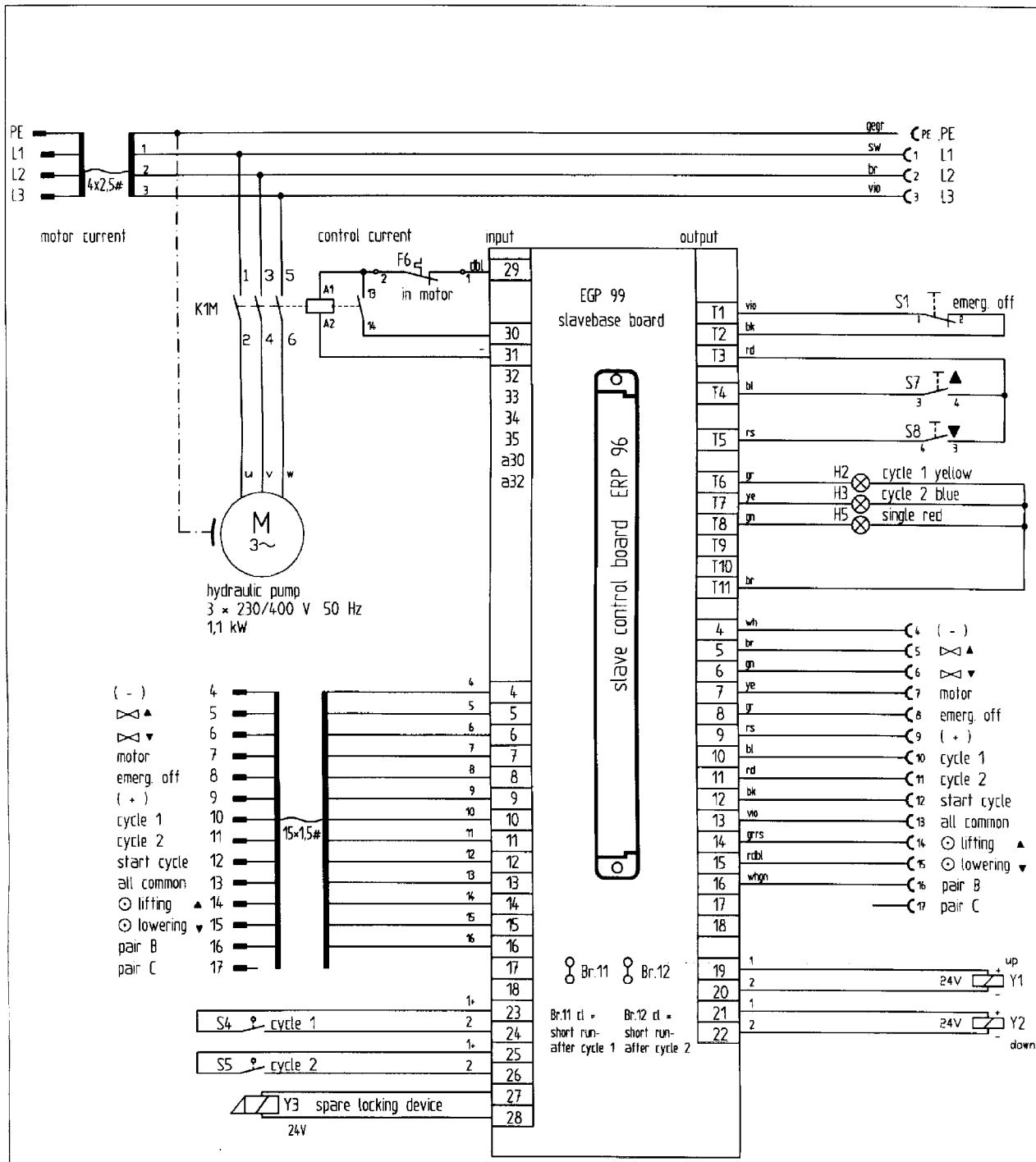
WIRING DIAGRAM – MASTER COLUMN



PARTS LIST TO WIRING DIAGRAM – MASTER COLUMN

	pos.	description	art.-no.
MASTER COLUMN		control panel housing EHB-master, with assembly plate, 300x300x150mm	SS-HB-STD
	HGP01	base ccircuit board HGP01, complete, EHB707-master	STPL-HGP01-KPL
	HRP99	control circuit board HRP99-light, complete, EHB-master	STPL-HRP99-LIGHT
	ERP96	control circuit board ERP96, complete, EHB707-slave	STPL-ERP96-KPL
	FEIN97BR	bridge board without fine-function	STPL-FEIN97BR
	6LED00	LED-circuit board 6LED00 complete (for 5 LED)	STPL-6LED00KPL-5
	F6	thermal overload switch inside motor	no spare part
	F2	fuse transformer control voltage M2.5A, 5x20	SI2,5MT5x20
	F3	fuse transformer control voltage M2.5A, 5x20	SI2,5MT5x20
	F7	fuse on master control board M1.6A, 5x20	SI1,6MT5x20
	F8	fuse on master control board M6.3A, 5x20	SI6,3MT5x20
	H1	LED lamp green	67S4600
	H2	LED lamp yellow	67S4550
	H3	LED lamp blue	67S4605
	H4	LED lamp green	67S4600
	H5	LED flasher lamp red	LD599ROT
	K1M	motor contactor 24VDC	LP4K0610BW3
	LED1	LED lamp green solenoid voltage o.k. (green), on master control board	67S4600
	LED2	LED lamp yellow control voltage o.k. (yellow), on master control board	67S4550
	Q1	main disconnect switch, lockable, Kloeckner-Moeller	P1-25/EA/SVB
	S1	emergency-stop switch	ZB4BT4
	S2	START-switch, front element	ZB4BW37
	S3	selection switch, 2 pos., front element	ZB4BJ2
	S4	limit roller switch XCMA1022, metal roller, cable 2m, IP67	XCMA1022
	S5	limit roller switch XCMA1022, metal roller, cable 2m, IP67	XCMA1022
	S7 / S8	up/down push button switch, incl. plastic cover, IP66	ZB4BA9112
	T1 + V1	transformer 230/400V / 24V, with rectifier V1	EG15VA150
	Y1	solenoid valve lifting, 24 V	see hydraulic
	Y2	solenoid valve lowering, 24 V	see hydraulic
	Y3	solenoid D70 of lock device	HT-D70-N24VDC
	M	electric motor 1.1KW, 230/400V, 50Hz, 3 phase, 1410rpm	M11403B14164-TH
		plug housing, PG21	7135016281
		plug inset 16-pol 400V 16A	7031016400
		socket housing 400V/16pol/16A, with lock	7132516280
	socket inset 16-poles, 400V, 16A	7030016400	
	interconnect cable EHB-master, 10x1.0-10m, with plug, grey, complete	KAB-706-VERB	
	power supply cable, rubber, 4x2.5-10m	KAB-706-ZUL	

WIRING DIAGRAM – SLAVE COLUMN

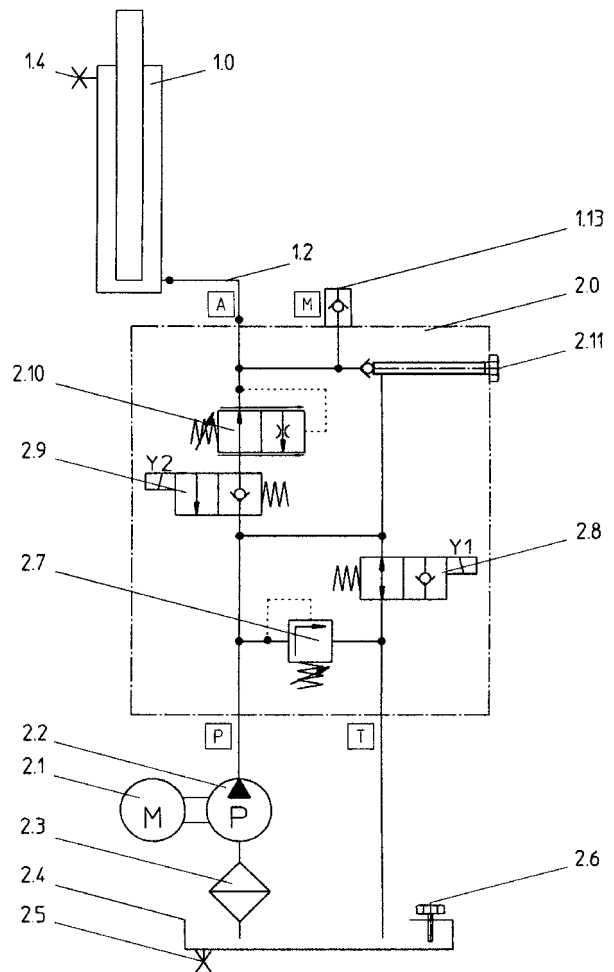
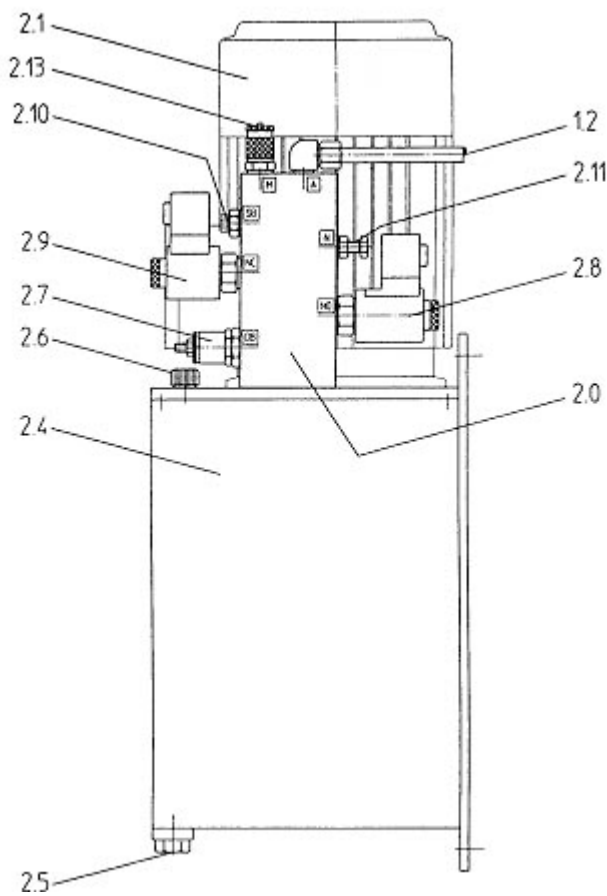


FINKBEINER lifting systems	wiring diagram	slave column 01		
D 72250 Freudenstadt	EHB 707	APlan7E	page 2	08.04.01 Pfau

PARTS LIST TO WIRING DIAGRAM – SLAVE COLUMN

SLAVE COLUMN		control panel housing EHB-slave, with assembly plate, 300x300x150mm	SB-NB-STD
	EGP99	case circuit board EGP99, EHB707-slave, complete	GRPL-EGP99
	ERP96	control circuit board ERP96, complete, EHB707-slave	STPL-ERP96-KPL
	6LED00	LED-circuit board 6LED00 complete (for 3 LED)	STPL-6LED00KPL-3
	F6	thermal overload switch inside motor	no spare part
	H2	LED lamp yellow	67S4550
	H3	LED lamp blue	67S4605
	H5	LED flasher lamp red	LD599ROT
	K1M	motor contactor 24VDC	LP4K0610BW3
	S1	emergency-stop switch	ZB4BT4
	S4	limit roller switch XCMA1022, metal roller, cable 2m, IP67	XCMA1022
	S5	limit roller switch XCMA1022, metal roller, cable 2m, IP67	XCMA1022
	S7	up/down push button switch, incl. plastic cover, IP66	ZB4BA9112
	Y1	solenoid valve lifting, 24 V	see hydraulic
	Y2	solenoid valve lowering, 24 V	see hydraulic
	Y3	solenoid D70 of lock device	HT-D70-N24VDC
	M	electric motor 1.1KW, 230/400V, 50Hz, 3 phase, 1410rpm	M11403B14164-TH
		interconnect cable EHB-slave, 15x1.5+4x2.5-10m, with plug, complete	KAB-706-RING
		plug housing, PG21	7135016281
		plug inset 16-pol 400V 16A	7031016400
	socket housing 400V/16pol/16A, with lock	7132516280	
	socket inset 16-poles, 400V, 16A	7030016400	

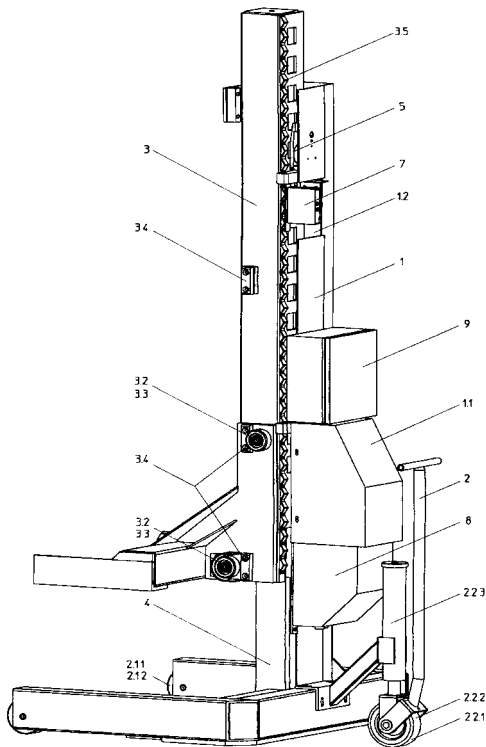
HYDRAULIC CIRCUIT DIAGRAM



LEGENDE AND SPARE PARTS LIST

pos.	description	art.-no.
1.0	hydraulic lifting cylinder F90/70	7060400008
1.2	steel pipe 10x1.5-900mm	H-RO706.5-1
1.4	bleading screw of lifting cylinder	no spare part
2.0	valve housing 70x30x150mm	7060803205
2.0	electric motor 1.1KW, 230/400V, 50Hz, 3 phase, 1410rpm	M11403B14164-TH
2.2	gear pump 2.2 ccm / rev. 300 bar max. G 1/8"	ZAPU2,2
2.2.1	cuppling for gear pump, konical 1:8	120747
2.2.2	cuppling for motor D19H7	120726
2.2.3	dog clutch A24 92SH yellow	120700
2.3	filter IG3/8" 90my	WT1089
2.4.1	oil tank	7060803016
2.4.2	cover for oil tank	7060803026
2.4.3	cork sealing for oil tank	7060803035
2.5	oil drain screw R1/4"	VSTIR1/4ED
2.6	dip stick R3/8"	OELMESS3/8
2.7	pressure relief valve, M18x1,5	VENDB18X1,5
2.8	2/2-solenoid valve 24 V DC, NO, 3/3"-16UNF, normal open	VEN2/2S024NO
2.9	hydraulic check valve 2/2 24V NC, 2/2-soleniod, 3/3"-UNF, normal closed	VEN2/2S024NC
2.10	regulation valve SB05H for lowering, 2.5-4.0 ltr/min.	69007829-03
2.11	hex. Screw M8 x 30, DIN933-8.8	933-8M08X030
2.11.1	lock nut M8 (SEALOK)	SEALOK-M8
2.11.2	ball D 6.5 mm	RB06,5/G20T
2.13	test connection SMK20-10L, G1/4", adaption thread M15x2	SMK-20-G1/4-PB

MECHANICAL PARTS



SPARE PARTS LIST

pos.	description	qty.	article-number
1	column EHB707	1	no spare part
1.1	cover for hydraulic driving unit RAL2004 orange	1	7060150006
1.2	cover for roller switches	1	7060141008-OF
2	wheel jack	1	no spare part
2.1.1	steel wheel D125-60mm, galvanized without bearings 6306-2RS	2	7070201012
2.1.2	deep groove ball bearing, d30, D72, B19, DIN625	4	6306-2RS
2.2.1	rubber wheel D200/50/20, 300kgs, ball bearing	1	ALEV160/20K
2.2.2	flat spring plate, brake of wheel jack	1	A032126004
2.2.3	spring of rear travelling device	1	D439
2.2.4	axial ball bearing d40 D60 H13	1	51108
3	carriage	1	no spare part
3.2	axle for carriage roller	4	7060323002
3.3	carriage roller, complete, with slide bearings draw. 706.03.21.00.9	4	7060321009-KPL
3.4	plastic slide guide of carriage, 95x30x20, draw. 706.03.32.00.A	4	706033200A-FR
3.5	switch cam 22x2-299.4 draw. 706.01.41.00.8	7	7060318002
4	hydraulic lifting cylinder	1	see hydraulics
5	lock latch	1	706050100A
7	housing for cycle switches	1	706070100005
8	hydraulic power unit	1	see hydraulics
9	electrical control panel	1	see electrics

CONFORMITY CERTIFICATE OF MANUFACTURER

Lifting Equipment: EHB 707V11

Manufacturer: FINKBEINER-Lifting Systems
Walter Finkbeiner GmbH
Alte Poststrasse 9 / 11
D-72250 Freudenstadt

Serial-No.: <<S/N>>

Hereby we confirm that the above lifting equipment is designed and manufactured according to standing CE-Safety Regulations according to UVV-VBG14, EN1493 and CE for vehicle hoists. The lifting equipment has been approved with TÜV-Certificate No. 70/205/10.E00104/95.

FINKBEINER-Lifting Systems
Walter Finkbeiner GmbH

Gerhard Finkbeiner

TEST CERTIFICATE OF MANUFACTURER

Lifting Equipment: Mobile lifting equipment EHB707V11
(vehicle lift consisting of individual columns)

Capacity: 7200 kgs per column (nominal dynamic load)

Manufacturer: FINKBEINER-Lifting Systems
Walter Finkbeiner GmbH
Alte Poststrasse 9 / 11
D-72250 Freudenstadt

Serial-No.: <<S/N>>

Date of Delivery: <<Datum>>

Place of Test: Plant of Walter Finkbeiner GmbH, Freudenstadt

Test Procedure: Above equipment has been fully tested in all functions, under nominal dynamic load and under 25 % static overload. Electric tests have been performed according to the safety requirements.
Hereby no failures occurred. There are no restrictions to put the lifting equipment into operation.

Name of tester: Gerhard Finkbeiner
(Dipl.-Ing. FH) mechanical engineer
for / at
Walter Finkbeiner GmbH
Alte Poststrasse 9 / 11
D-72250 Freudenstadt

<<Datum>>

Signature

Walter Finkbeiner GmbH, Alte Poststrasse 9 / 11, D - 72250 Freudenstadt
OPERATOR'S MANUAL FOR MOBILE COLUMN LIFT TYPE EHB



Certificate

Examination
EC Type Certificate
according to Article 8, Section 2 of the EC directive 89/392/EEC
amended by the directive 91/368/EEC,
the directive 93/44/EEC
and the directive 93/68/EEC

Certificate No. 70/205/10.E00104/95

Date of order
23.11.1994

Examination report
GEL2-7.940060040/1

Date of issue of certificate
29.06.1995

This is to confirm that the below mentioned product corresponds to the fundamental requirements of the Council Directive 93/43/EEC of 14 June 1989 (including the above mentioned amendment directives) on the approximation on the laws of the Member States and that it can be marked with the CE-marking as indicated below. The remarks on the back of this page have to be noted.



Company	852422 Walter Finkbeiner GmbH Alte Poststraße 9 52250 Freudenstadt	Place of manufacture	6852422 Walter Finkbeiner GmbH Alte Poststraße 9 52250 Freudenstadt
Product	Vehicle Servicing Lifts (Mobile or movable jacks)		
Type(s)	EHB		
Description	Movable jacks, electric-hydraulic, synchronisation control system by means of grid		

Mannheim, 26.01.1995



Notified body

Gohlke

TÜV CERT-Certification Body
for Machinery
Dudenstraße 28
D-68167 Mannheim

notified by the EC identification no. 0047

GE-18.1/95 IP/Ge, Stand 01/95

Appendix - Inspection and testing

GENERAL

The following notes, together with an outline inspection and testing certificate, are included as a guide to assist management to meet its obligations.

The operator, or other competent person, should record all the faults, difficulties and problems actually experienced in the examination, checking, maintenance and operational use of the vehicle lift (e.g. corrosion, cracking, missing parts, hydraulic leaks).

ITEMS RECOMMENDED FOR INSPECTION

	satisfactory	unsatisfactory	acceptable criteria
rated capacity displayed			
operating instructions displayed			
operator's manual available			
make, model and serial no. displayed			
vehicle access			
warning sign			
emergency stop switch			
up/down button			
control lamps			
synchronizing switches			
switch cam on carriage			
interconnect cables with plugs			
sockets with lock clamps			
power supply cable with plug			
control panel closed and sealed			
structure of column and carriage (alignment and structural integrity)			
structural cracking, welds			
corrosion			
travelling device			
carriage rollers			
lateral guide parts of carriage			
wheel forks secured by pin			
mechanical safety locking device			
hydraulic cylinder			
oil level			
hydraulic pressure			
oil leaks			
carriage rollers lubricated			

CERTIFICATE FOR ROUTINE, ANNUAL AND MAJOR TEST

vehicle lift, serial-no. <<S/N>>

sheet no.

The lifting equipment has been examined at a *routine / annual / major**) test on
Herewith *no / following**) failures have been founded.

General condition description of equipment:

—

—

—

Description of test:

—

—

Remarks:

—

—

Outstanding tests: _____

I certify that I have examined and tested as appropriate and find that the equipment *is / is not **) in a satisfactory condition for safe use.

Re-examination of equipment *necessary / not necessary *)*

Competent person:

(place, date)

(signature)

name

address:

qualification:

employed at:

company adress:

knowledge of failures **) _____

failures repaired **) _____

**Walter Finkbeiner GmbH, Alte Poststrasse 9 / 11, D - 72250 Freudenstadt
OPERATOR'S MANUAL FOR MOBILE COLUMN LIFT TYPE EHB**

- *) strike out words not applicable
- **) confirmation of operator or management with date and signature

CERTIFICATE FOR ROUTINE, ANNUAL AND MAJOR TEST

vehicle lift, serial-no. <<S/N>>

sheet no.

The lifting equipment has been examined at a *routine / annual / major**) test on
Herewith *no / following**) failures have been founded.

General condition description of equipment:

—

—

—

Description of test:

—

Remarks:

—

—

Outstanding tests: _____

I certify that I have examined and tested as appropriate and find that the equipment *is / is not **) in a satisfactory condition for safe use.

Re-examination of equipment *necessary / not necessary *)*

Competent person:

(place, date)

(signature)

name

address: _____

qualification: _____

employed at: _____

company adress: _____

knowledge of failures **) _____

failures repaired **) _____

*) strike out words not applicable
**) confirmation of operator or management with date and signature

CERTIFICATE FOR ROUTINE, ANNUAL AND MAJOR TEST

vehicle lift, serial-no. <<S/N>>

sheet no.

The lifting equipment has been examined at a *routine / annual / major**) test on
Herewith *no / following**) failures have been founded.

General condition description of equipment:

-

-

-

Description of test:

-

Remarks:

-

Outstanding tests: _____

I certify that I have examined and tested as appropriate and find that the equipment *is / is not **) in a satisfactory condition for safe use.

Re-examination of equipment *necessary / not necessary *)*

(place, date)

Competent person:

(signature)

name

address: _____

qualification: _____

employed at: _____

company adress: _____

Walter Finkbeiner GmbH, Alte Poststrasse 9 / 11, D - 72250 Freudenstadt
OPERATOR'S MANUAL FOR MOBILE COLUMN LIFT TYPE EHB

knowledge of failures **) _____

failures repaired **) _____

*) strike out words not applicable

**) confirmation of operator or management with date and signature

CERTIFICATE FOR ROUTINE, ANNUAL AND MAJOR TEST

vehicle lift, serial-no. <<S/N>>

sheet no.

The lifting equipment has been examined at a *routine / annual / major**) test on
Herewith *no / following**) failures have been founded.

General condition description of equipment:

—

—

—

Description of test:

—

Remarks:

—

—

Outstanding tests: _____

I certify that I have examined and tested as appropriate and find that the equipment *is / is not* *) in a satisfactory condition for safe use.

Re-examination of equipment *necessary / not necessary* *)

Competent person:

(place, date)

(signature)

name

adress:

**Walter Finkbeiner GmbH, Alte Poststrasse 9 / 11, D - 72250 Freudenstadt
OPERATOR'S MANUAL FOR MOBILE COLUMN LIFT TYPE EHB**

qualification: _____

employed at: _____

company adress: _____

knowledge of failures **) _____

failures repaired **) _____

*) strike out words not applicable

**) confirmation of operator or management with date and signature

CERTIFICATE FOR ROUTINE, ANNUAL AND MAJOR TEST

vehicle lift, serial-no. <<S/N>>

sheet no.

The lifting equipment has been examined at a *routine / annual / major**) test on
Herewith *no / following**) failures have been founded.

General condition description of equipment:

-

-

-

Description of test:

-

Remarks:

-

-

Outstanding tests: _____

I certify that I have examined and tested as appropriate and find that the equipment *is / is not* *) in a satisfactory condition for safe use.

Re-examination of equipment *necessary / not necessary* *)

Competent person:

(place, date)

(signature)

name

**Walter Finkbeiner GmbH, Alte Poststrasse 9 / 11, D - 72250 Freudenstadt
OPERATOR'S MANUAL FOR MOBILE COLUMN LIFT TYPE EHB**

adress: _____

qualification: _____

employed at: _____

company adress: _____

knowledge of failures **) _____

failures repaired **) _____

*) strike out words not applicable

**) confirmation of operator or management with date and signature