



ALH-3024



ELECTRO-HYDRAULIC LIFT



ALH-5024



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To The Reader

Whilst every effort has been made to ensure that the information contained in this manual is correct, complete and up-to date Autec - SUN / VLT Equipment reserves the right to change any part of this document at any time without prior notice

BEFORE OPERATING THIS UNIT, PLEASE READ THIS MANUAL CAREFULLY, PAYING EXTRA ATTENTION TO THE SAFETY WARNINGS AND PRECAUTIONS.

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1. GENERAL INFORMATION

1.1 Introduction

Installation of the lift may only be carried out by a representative of the manufacturer or supplier and therefore no installation instructions are included in Operators Manual. Arrangements for the installation of the lift must be made with the manufacturers or suppliers representative.

The lift has been designed and manufactured to the highest standards to give many years of reliable and safe operation if used and maintained in accordance with the safety, operational and maintenance instructions contained in this manual.

1.2 Use of this manual

This manual is intended for use by workshop technicians in charge of the lift (operators) and routine maintenance technicians (maintenance operators). The operating instructions are considered to be an integral part of the machine and must remain with it for the whole of its useful life. Read every section of this manual carefully before operating the lift since it contains important information concerning the:

- safety of people
- safety of the lift
- safety of lifted vehicles



THE COMPANY IS NOT LIABLE FOR ANY POSSIBLE PROBLEMS, DAMAGE OR ACCIDENTS ARISING FROM FAILURE TO FOLLOW THE INSTRUCTIONS.

1.3 Contained in this manual

The following is recommended for the proper use of this manual:

- keep the manual in an easily accessible place near the lift;
- keep the manual in an area protected from damp;
- use this manual properly without damaging it
- do not make changes to the manual; changes and updates may only be made by the manufacturer;

This manual is an integral part of the lift and should be given to the new owner if and when the lift is resold.

1.4 Safety

Every effort has been made to make this lift as safe as possible however, as with all lifting equipment, it is important that safe working practices are followed.

General safety information is to be found in the chapter "Safety Precautions" and specific safety warnings and cautions are printed where applicable this through out the text. All personnel working with or in the vicinity of this lift must be familiar with the warnings and cautions contained in this manual.

SAFETY MESSAGES ARE PRINTED IN BOLD CAPITALS.



2 SAFETY PRECAUTIONS

2.1 Safety Notice



FOR YOUR SAFETY, READ THIS MANUAL AND THE SAFETY PRECAUTIONS THOROUGHLY BEFORE OPERATING THE LIFT.



THE LIFT IS INTENDED FOR USE BY PROPERLY TRAINED PERSONNEL ONLY. THE SAFETY MESSAGES PRESENTED IN THIS MANUAL ARE INTENDED AS REMINDERS TO TRAINED OPERATORS TO EXERCISE CARE WHEN USING THE UNIT.

2.2 General

The lift is supplied in a safe condition. In order to keep it in a safe condition and to ensure safe operation of the Equipment, the operating and maintenance instructions contained in this manual must be followed and the safety warnings & cautions must be observed.

2.3 General Warnings

General Warnings, giving instructions for the prevention of injury to people, are given in the following list. Further specific warnings are printed where applicable before the appropriate subject.



BEFORE USING THE LIFT, MAKE SURE THAT THE MAIN POWER SUPPLY CABLE IS CONNECTED TO A MAIN POWER SUPPLY OUTLET OF THE CORRECT VOLTAGE WITH A PROTECTIVE EARTH CONTACT. (REFER SERIAL NUMBER PLATE ON THE UNIT FOR MAIN POWER REQUIREMENTS). VOLTAGES HIGHER THAN SPECIFIED MIGHT DAMAGE THE UNIT AND MAKE IT UNSAFE.



THE USE OF MAIN POWER SUPPLY EXTENSION CABLES IS NOT RECOMMENDED. IF ONE HAS TO BE USED, IT SHOULD HAVE CONDUCTORS WITH A DIAMETER OF AT LEAST 1.5 mm. AND A PROTECTIVE EARTH CONTACT.



ONLY APPLY FUSES WITH THE FUSE RATING INDICATED NEAR THE FUSE HOLDER. THE USE OF INCORRECTLY RATED FUSES CAN DAMAGE THE UNIT OR THE POWER CABLE AND MAKE THESE ITEMS UNSAFE.



DO NOT OPERATE THE UNIT BEFORE CONTACTING THE SERVICE CENTRE OF THE MANUFACTURER/SUPPLIER, WHEN THE UNIT:

- SHOWS VISIBLE DAMAGE
- FAILS TO OPERATE
- HAS BEEN SUBJECTED TO PROLONGED STORAGE UNDER UNFAVORABLE CONDITIONS
- HAS BEEN SUBJECTED TO SEVERE TRANSPORTATION STRESSES.
IT IS POSSIBLE THAT THESE CONDITIONS CAN MAKE THE UNIT UNSAFE.



ONLY USE THE LIFT IF YOU ARE QUALIFIED TO WORK WITH IT.



KEEP PERSONS AND ANIMALS AWAY FROM THE LIFT WHILST IN OPERATION.



ENSURE THAT THE VEHICLE CANNOT MOVE DURING LIFTING. ALWAYS SET THE GEAR SELECTOR IN NEUTRAL, SET THE PARKING BRAKE AND PLACE WHEEL CHOCKS IN FRONT AND AT THE REAR OF THE DRIVE WHEELS BEFORE LIFTING A VEHICLE.

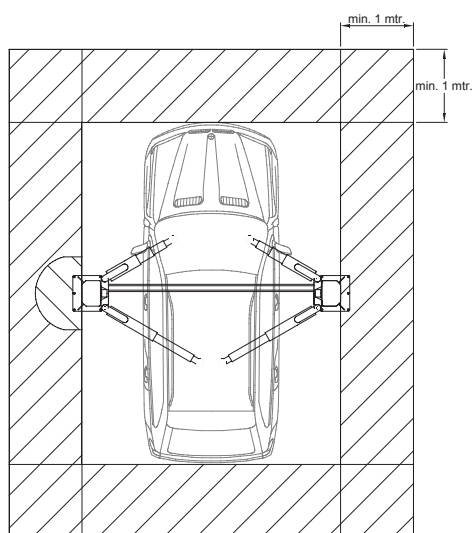




THE LIFT HAS BEEN DESIGNED FOR LIFTING VEHICLES AND HOLDING THEM AT ANY HEIGHT WITHIN THE WORKING PARAMETERS OF THE MACHINE IN AN ENCLOSED ENVIRONMENT. ANY OTHER USE IS FORBIDDEN INCLUDING BUT NOT LIMITED TO:

- THE WASHING OF VEHICLES;
- THE LIFTING OF PERSONS OR USE AS SCAFFOLDING;
- EXERTING PRESSURE;
- LOADING.

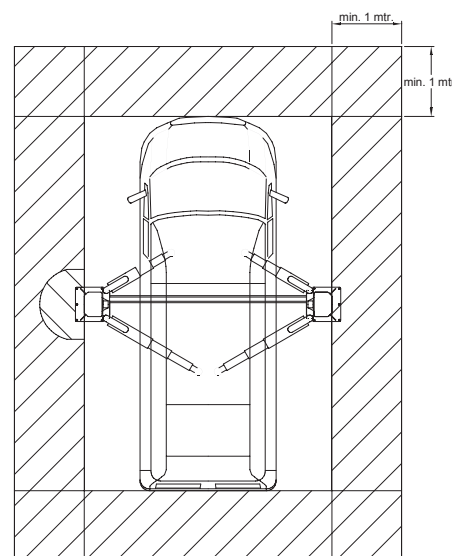




THE PRESENCE OF PERSONS INSIDE THE DANGER ZONE (fig. 1 pos. 1) IN THE SAME FIGURE IS STRICTLY PROHIBITED. THE PRESENCE OF PERSONS BENEATH THE VEHICLE DURING OPERATIONS IS PERMITTED ONLY WHEN THE VEHICLE IS PARKED IN THE ELEVATED POSITION.



1 = 
2 = 

ALH-3024



1 = 
2 = 

ALH-5024

fig. 1

The safety zone (fig. 1 pos. 2) is to some extent determined by the dimensions of the vehicle to be lifted.



IT IS POSSIBLE THAT THESE CONDITIONS CAN MAKE THE UNIT UNSAFE.





ONLY USE THE LIFT FOR ITS DESIGNED PURPOSE. THE MANUFACTURER SHALL NOT BE LIABLE FOR ANY INJURY OR DAMAGE TO PEOPLE, VEHICLES OF ANY OTHER OBJECTS RESULTING FROM IMPROPER OR UNAUTHORIZED USE OF THE LIFT



FOLLOW ALL APPLICABLE HEALTH REGULATIONS AND SAFETY STANDARDS WHEN WORKING WITH THE LIFT.

2.4 The weight of the vehicle

The maximum loading capacity may be exceeded.

MAX. 3.000 kg for ALH-3024 and MAX. 5.000 kg for ALH-5024.

2.5 Pictograms on lift (fig. 2)

IN THE EVENT OF THESE PICTOGRAMS BEING DAMAGED, THEY MUST BE REPLACED BY NEW ONES AVAILABLE FROM Autec - SUN / VLT Equipment.

1	OB-904	7	OB-901-3000
2	OB-904-10/10A	8	OB-900-002
3	OB-904-07	9	OB-I901-ENSKA
4	OB-904-09	10	OB-901-DFSPI
5	OB-903-002	11	OB-904-08
6	OB-905-EDNL	12	OB-904-06

Control unit.

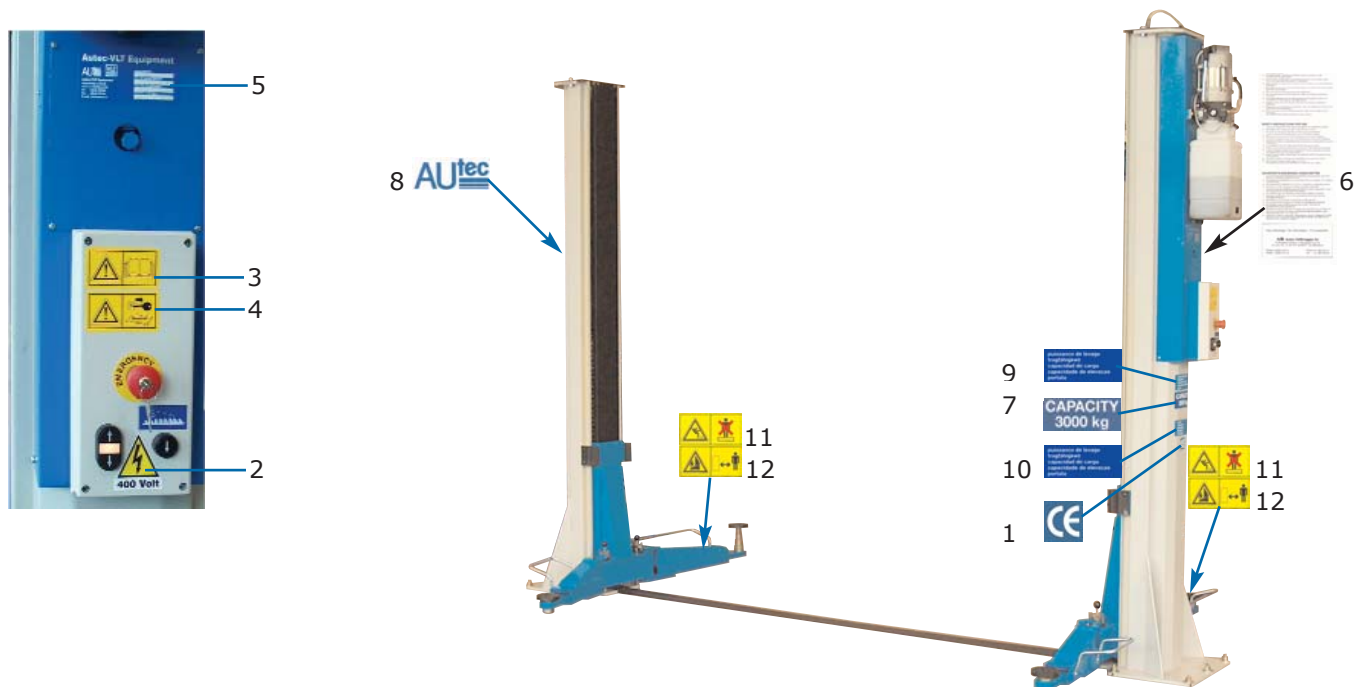


fig. 2

3 SAFETY DEVICES

- Microswitches
- Leakage / fracture protection
- Electrical protection
- Foot-protection
- Lift locking

WARNING:



THE LIFT IS DESIGNED AND CONSTRUCTED TO LIFT VEHICLES AND TO HOLD THEM IN A CERTAIN POSITION IN A COVERED WORKING PLACE. ANY OTHER FORM OF USE IS NOT PERMITTED. IN SHORT, THE LIFT IS NOT SUITABLE FOR THE FOLLOWING PURPOSES:

- Washing and spraying work.
- To be used as a device for applying force.
- To be used as a goods lift.
- To be used as a jack or for lifting vehicles for changing wheels.

The manufacturer hereby refuses entertain any claims for damages arising in connection with injury to persons or damage to vehicle or other property caused due to incorrect and/or unauthorized use of the lift.

During lifting- and lowering movements, the operator must be within the zone of operation (2), as shown in **fig. 1**. The presence of any person in the safety zone (1) is strictly forbidden. The presence of persons under the vehicle is only permitted if the vehicle is parked in the lifted position.



USE THE LIFT ONLY IF ALL THE SAFETY ARRANGEMENTS ARE WORKING PROPERLY. IF THESE RULES ARE NOT FOLLOWED, SERIOUS INJURY COULD BE CAUSED TO PERSONS AS WELL AS IRREPARABLE DAMAGE TO THE LIFT AND THE VEHICLE ON THE LIFT.

3.1 General precautions:

- The operator is bound to follow the regulations which apply in the country in which these lifts are installed. In addition, the operator must :
- Always work in the operators area as designated in the manual.
- Never remove the protective guards or dismantle or shut down the mechanical, electrical or other types of safety arrangements.
- Read the safety regulations relating to the lift and note of the safety information provided in this manual.

The following terms have been used in this manual to describe the various types of risk :



DANGER: there is a direct possibility of danger which could lead to serious injury or death.



WARNING: this indicates situations and/or actions which are unsafe and could lead to injuries of various types except death.



CAUTION: this indicates situations and/or actions, which are unsafe and could lead to light injuries to persons and/or damage to the lift, the vehicle or other properties.

3.2 Risk of damage due to electricity

Special safety arrangements have been made on the lift in places where the risks are very high.

3.3 Risk and protective media

The risks to which the operator is exposed when the vehicle is in a raised position, together with the protective media which have been installed, in order to limit the possible dangers.

3.4 Hazards associated with lifting of a vehicle

The following provisions have been made to avoid damage from excessive weight:

1. In case of impact with an obstacle during lowering, the lift will stop its descending.
2. Leakage and breakage protection: a pipe-breakage valve has been fitted in the cylinder head that will in the event of pipe breakage reduce the rate of descent of the tracks.
3. Acoustic signal: the lift will during its descend produce an acoustic signal during the lowest 400 mm area.
4. Lifting bridge locking: next to the catch bar in each column a locking mechanism has been installed. This consists of a strip in which grooves have been cut at regular intervals and with them slide locks that are shot into them by a spring when the raising/lowering button is released.
5. Thermal protection: the electric motor is fitted with thermal protection, which guards the motor from over heating.

3.5 Risk for persons

This paragraph describes the risks to which the operator or any other person near the working area where the lift is in operation, in case the lift is not used in the appropriate manner.

3.5.1 Risk for the operator.

This risk arises in cases where the operator is not standing at the appointed place at the control cabinet; when the lift with the vehicle is being lowered, it is not permissible for the operator to stand below the descending system and its load to any extent. It is imperative that the operator must be standing in the operating zone during the lifting and lowering operation. (fig. 3)

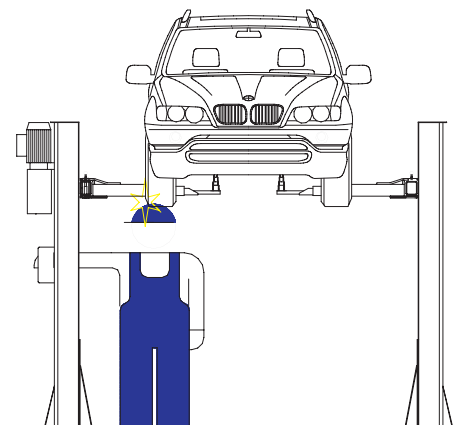


fig. 3

3.5.2 Risk for personnel

When the lift with the vehicle is descending, it is not permitted for any of the personnel to enter the room or walk under the (downwards) moving parts of the lift. **(fig. 4)**

The operator should not start the motion of the lift until he has assured himself that there are no persons within the danger zone.

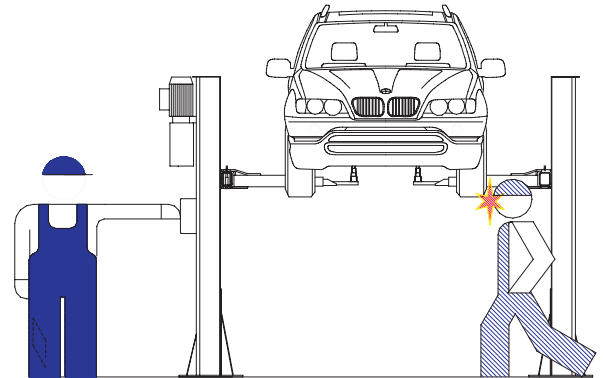


fig. 4

3.5.3 Risk for impact

Caused by parts of the lift or the vehicle that are positioned at head height. When, due to operational reasons, the lift is immobilized at relatively low elevations (less than 1.75 m from the ground) personnel must be careful to avoid impact with parts of the machine not marked with special hazard colour. **(fig. 5)**

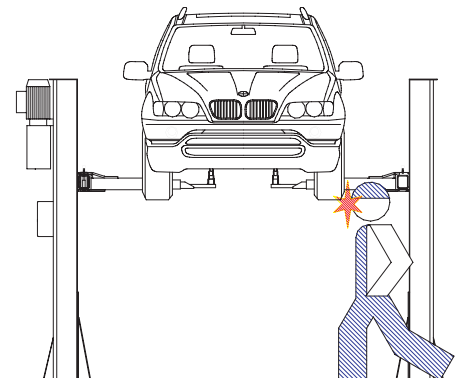


fig. 5

Never enter the vehicle or start the motor when the vehicle is on the lift **(fig.6)**

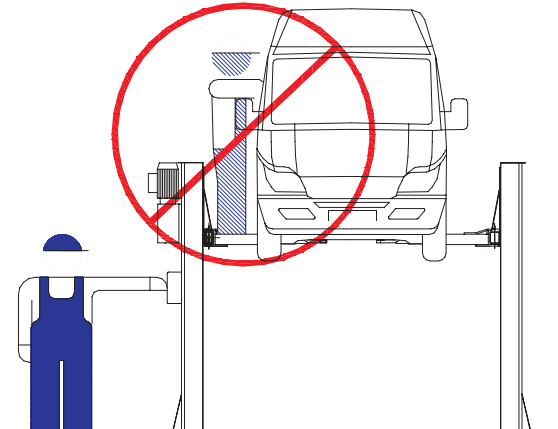


fig. 6

Never rest any fittings or other objects against the platform and never place such objects under the platform when it has a load mounted on it, since this can impede the lowering operations and may cause the vehicle to fall off the platform **(fig. 7)**

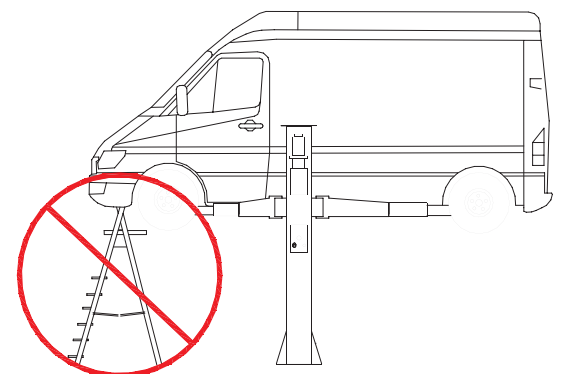


fig. 7

3.5.4 Risk of the vehicle falling from the lift.

Vehicle falling from the lift can be caused when the vehicle is improperly placed on platforms, and when its dimensions are incompatible with the lift or by excessive movement of the vehicle. In this case, keep immediately away from the working area.

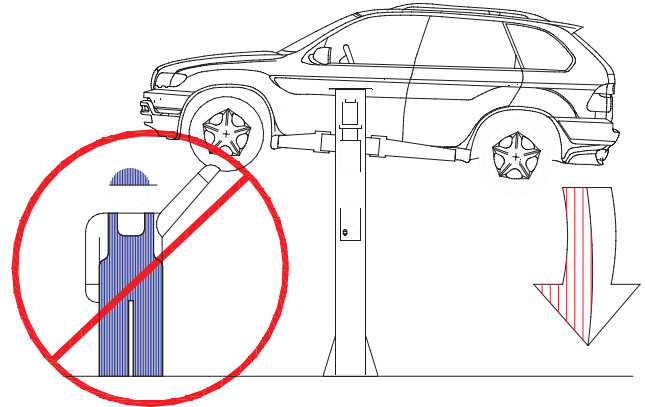


Fig. 8

3.5.5 Risk for sliding out.

This risk can be overcome by avoiding the spillage of oil or grease in the area surrounding the lift (**fig. 9**). Apart from that, any oil spillage which may occur should be thoroughly removed from the spot.

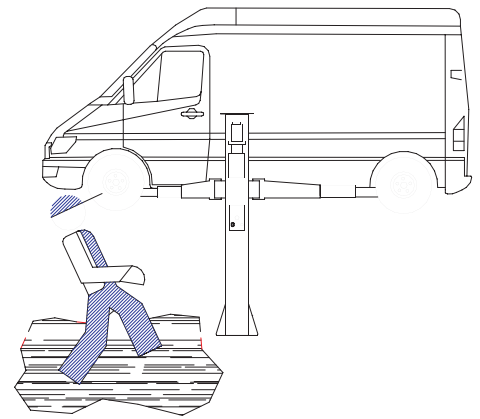


fig.9

3.5.6 Risk for electrocution.

Never spray water or steam or solvents or paint in the area immediately surrounding the platform and the control cabinet (**fig.10**)

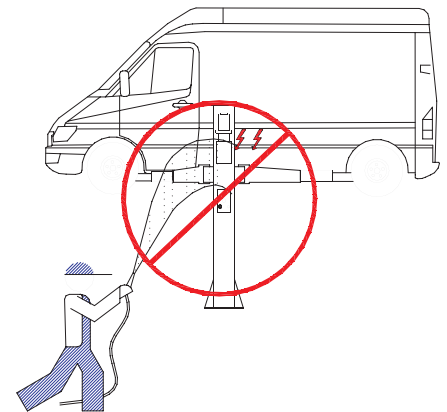


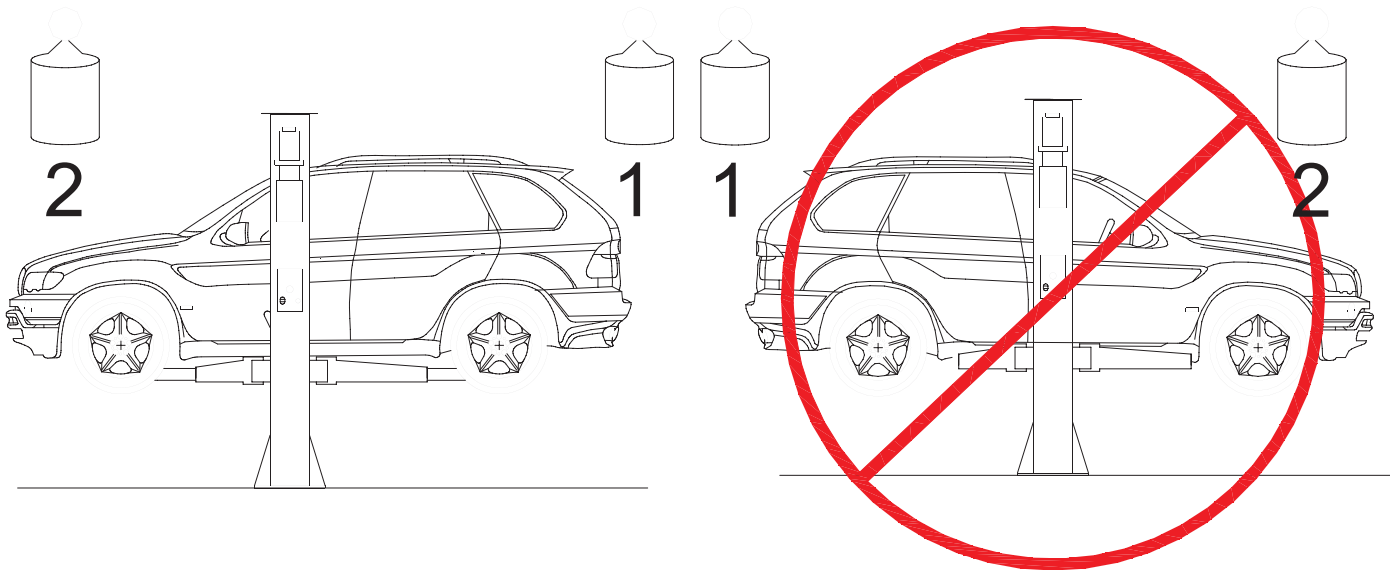
fig.10

3.5.7 Risk due to insufficient lighting

The area surrounding the lift must be properly lighted according to the legal requirements applicable in the place of installation.

3.5.8 Risk of use/maintenance

Autec uses material of the highest quality in its lift. These must be used according to the standard specified, and maintenance must be carried out regularly.



Any unauthorized modifications or tempering with the equipment excludes the manufacturer's responsibility for the damages caused by or related to the above mentioned acts. The removal of or tempering with safety devices constitutes an infringement of European Safety Regulations.



Any other use which differs from that provided by the manufacturer of the machine is strictly forbidden.



USE OF NON GENUINE PARTS MAY CAUSE DAMAGE TO PEOPLE OR OBJECTS.

The lift has been designed and built as required by:
European Directives: 89/392 EEC, 93/44 EEC, 93/68 EEC

TECHNICAL RULES:
European rules: EN 291/1992, EN 292/1992

ELECTRICAL SYSTEM:
Italian rules: UNI 9584, UNI EN 60204 CEI/8

4. PACKING, TRANSPORT AND STORAGE

Every action involving the operation, transportation or unpacking of the equipment must only be done by trained personnel who have a proper knowledge of the lift, and who are familiar with the contents of this operating manual.

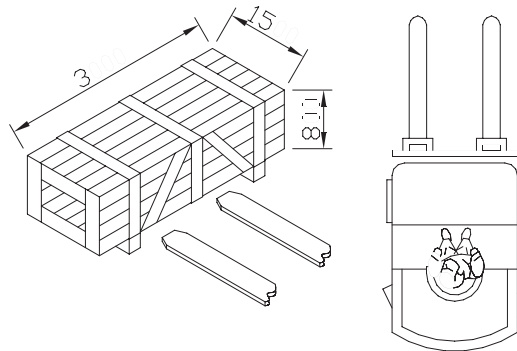


fig.11

4.1 Lifting and moving the packing

The boxes must be lifted and moved with the help of a fork lift truck or crane. The equipment chosen must be capable of lifting and moving the equipment safely, keeping in mind the dimensions of the vehicle, the weight, the centre of gravity and projecting and fragile parts.

4.2 Storage

The packed lift must always be placed in a covered area at a temperature between -10 °C and + 40 °C and may not be exposed to direct sunlight.

4.3 Opening the crates and boxes

Check whether the machine has been damaged during transportation, and whether all the components as mentioned in the packing list are physically present.

- avoid sudden jolts and tugs, be careful of uneven surfaces, bumps etc...;
- be extremely careful of exposed parts: obstacles, difficult through ways, etc...;
- wear suitable and protective clothing;
- after having removed the various packing, place them in special waste collecting areas which are inaccessible to children and animals where they will then be disposed of;
- on arrival, check that the packing has not been opened and, once unpacked check that nothing has been damaged.

4.4 Product Identification

The identification data of the machine are shown in the label placed on the frame of the machine (**fig. 11**) and indicated in the declaration of conformity. Use this data both to order spare parts and when getting in touch with the manufacturer.



fig. 12



THE REMOVAL OF THIS LABEL IS STRICTLY FORBIDDEN.

Machines may be updated or slightly modified in appearance and, as a consequence, may present features different from those shown without prejudice to what is described on it.

4.5 Warranty

The warranty is valid for a period of 12 months starting from the date of the purchase invoice. The warranty will be automatically invalidated if unauthorized modifications to the machine or parts there off are carried out. The Manufacturer's authorized personnel must verify defects in workmanship or materials.

4.6 Servicing

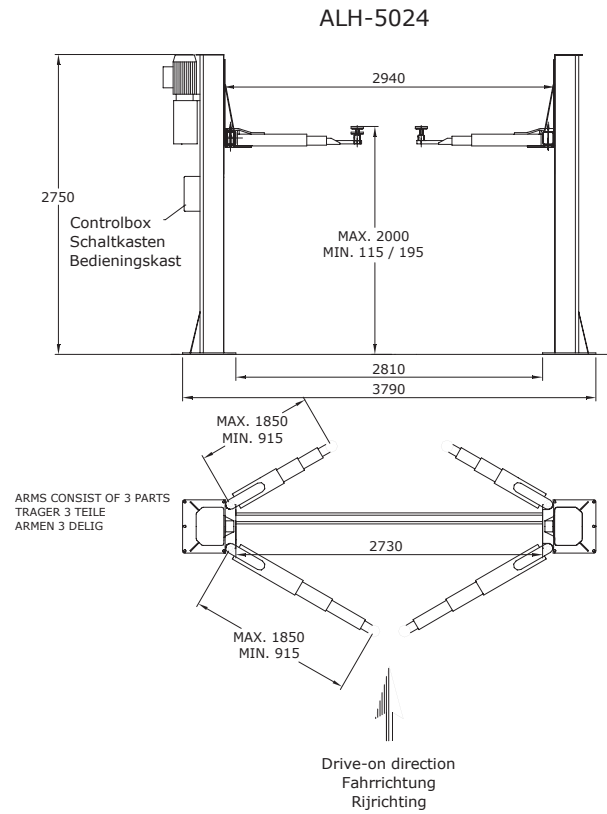
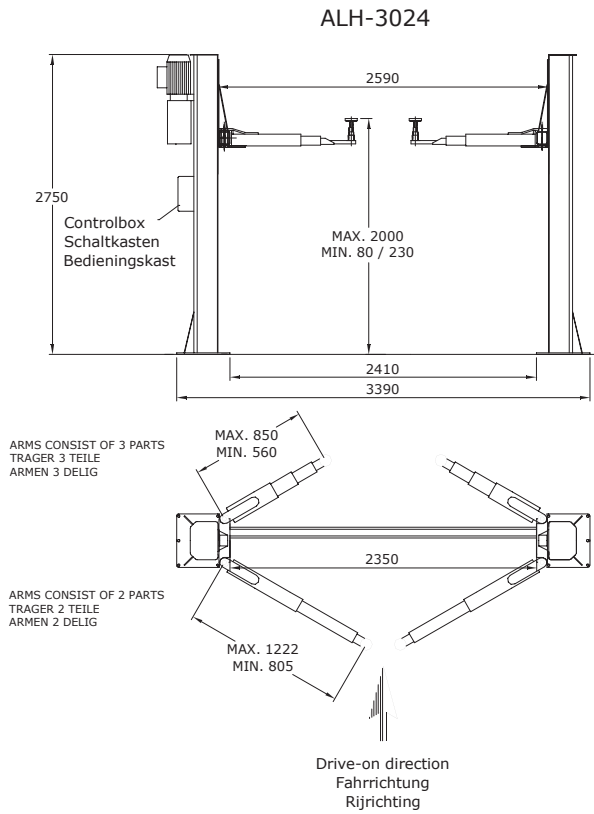
For all servicing and maintenance operations not specified or shown in these instructions, contact the Dealer where the machine was purchased or the Manufacturer's Commercial Department.

4.7 Technical Specification

SIZE AND MAIN FEATURES	ALH-3024	ALH-5024
Lifting capacity main lift	3.000 kg	5.000 kg
Lifting time	40 sec	40 sec
Descending time	40 sec	40 sec
Total weight	480 kg	720 kg
Working temperature	-10 oC / +40 oC	-10 oC / +40 oC
Working environment	Covered	Covered
Dimensions	fig.5.	fig.5.
CE number	390 150X 0116 11 96	390 150X 0116 11 96
Notified Body	Bureau Veritas	Bureau Veritas
Noise level	70dB (A) / 1 m	70dB (A) / 1 m
Maximum lifting height	2000 mm	2000 mm
Minimum pick up height	80 mm	100 mm
Maximum pick up height	230 mm	250 mm
Widt inside arms	2350 mm	2950 mm

ELECTROMOTOR		
Motor power	2,6 KW	2,6 KW
Voltage	230V/400V(3-Ph). +/- 10%	230V/400V(3-Ph). +/- 10%
Frequency	50/60 Hz	50/60 Hz
Amperage	400 V / 50 Hz / 3Ph	400 V / 50 Hz / 3Ph
No. of wires	4	4
Speed	1400 Rpm	1400 Rpm
Motor enclosure type	B14	B14
Insulation class	IP 54	IP 54

PUMP		
Type	Gear pump	Gear pump
Flow rate	3,7 cm ³ /g	8 cm ³ /g
Continuous working pressure	150 bar	150 bar
Discontinuous working pressure	160 bar	160 bar
Peak pressure	180 bar	180 bar



5 INSTALLATION



ONLY SKILLED TECHNICIAN, APPOINTED BY THE MANUFACTURER, OR BY AUTHORISED DEALERS, MUST BE ALLOWED TO CARRIED OUT THESE OPERATIONS. SERIOUS DAMAGE TO PEOPLE AND TO THE LIFT CAN BE CAUSED IF THEY ARE MADE BY OTHER PERSONS.

5.1 Preliminary Operations

CHECKING FOR ROOM SUITABILITY

The lift has been designed to be used in covered and sheltered places. The place of installation must not be next to washing areas, painting workbenches, solvent or varnish deposits; the installation near to rooms where a dangerous situation of explosion can occur is strictly forbidden. The relevant standards of the local Health and Safety at Work regulations, for instance with respect to minimum distance to wall or other equipment, escapes and the like, shall be observed.

LIGHTING

Lighting must be carried out according to the effective regulations of the place of installation. All areas next to the lift must be well and uniformly lit to allow maintenance and setting operations as per manual instructions avoiding shadow areas, reflection and dazzling

INSTALLATION SURFACE OR HOLE

The lift must be placed on a level and sufficiently resistant floor. The surface and foundation must be suitable for bearing maximum stress values, also in unfavourable working conditions. For installations on elevated surfaces, compliance with the maximum carrying capacity of the surface is recommended.

5.2 Columns assembly



UNAUTHORISED PERSONS ARE NOT ALLOWED TO ENTER DURING ASSEMBLY.

- Transport columns to the installation site by using hoisting means with load capacity of 500 kg at least.
- To prevent the columns from dropping during transport, they should be lifted according to their centre of gravity.

5.3 Lift Installation and start up instructions

- Hoist the two columns from the ground floor positioning P1 column (with control unit) to the left (according to drive in direction)
- Use hoses cover plate as reference for the two post columns distance.
- Fix the columns to the ground with expansion bolts
- Before tightening the fixing bolt definitively be sure the two columns are leveled.
- Once the columns are confirmed to be leveled tighten the bolts.
- Before making any connection (electrical, hydraulic or pneumatic) lift the carriages from ground level (some centimeters).
- Connect hydraulic hose with pipes installed on columns (P1-P2) . (Ref.1, Ref.2)
- Connect pneumatic pipe installed on P1 column to the fitting placed on P2 column. (Ref.2)
- Take limit switch from P1 column and fix it on P2 column (Ref.3)
- Place and fix hoses cover between two columns.
- Fill in the oil tank (3Ton, 15 L not at once ; 4-5Ton, 20 L not at once).
- Feed with appropriate voltage the lift as shown on control box.
- By pushing lifting button P1 carriage will go up. (If not interchange the phases)
- Lift P1 carriage up to 50 cm from ground floor and install the arms.
- Push lifting button until P1 carriage reaches its maximum height.



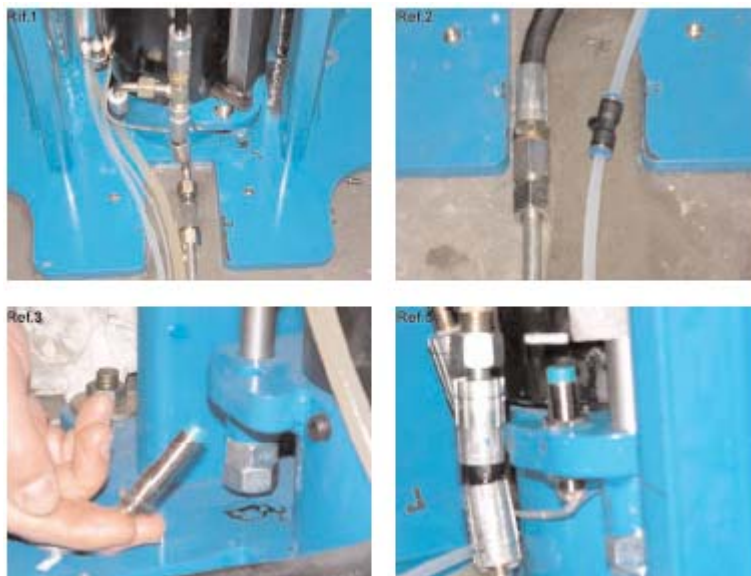
- By keeping lifting button pressed the motor will continue to work and hydraulic unit will discharge.
- Unloose into counter clock way the tap placed on P1 column.
- By pressing the lifting button carriage P2 will rise.
- When P2 carriage reaches 50 cm height from ground floor install the arms.
- Keep lifting till maximum height.
- Turn tap clock way (Ref.4)
- Send air to main circuit.
- Press lowering button.
- Mechanical safety unlocking will be operated by a solenoid valve activated when lowering button is pressed.
- After few seconds lowering valve will be actuated.
- In case the lift does not low, check the limit switches are settled .(Ref.5)
- If they are settled carry out two or three complete working cycles. If P2 column stays lower than P1 open the tap and press lifting button.
In P2 column stays higher than P1 low the carriages by pressing the lowering button and open the tap slowly.
- Carry out some no load working cycles
- Once the lift works properly proceed with on load test .
- Verify:

Carriages sliding
Mechanical safety functioning
Disengagement of arms locking
Maximum lifting capacity

- When above verifications are completed install columns covers.

The lift is now ready to be used.

For any question and/or problem please contact the seller, do not make any repairing without contacting the seller.





5.4 Checks and inspections

5.4.1 Electrical checks

- lift grounding;
- operation of the following devices:
 - top position sensor
 - Push buttons

5.4.2 Hydraulic system check

- proper oil level in the tank
- no leakage and blow-by
- cylinder operation

5.5 Set up and adjustments

5.5.1 No load checks

Carry out two or three complete cycles of lowering and lifting and check:

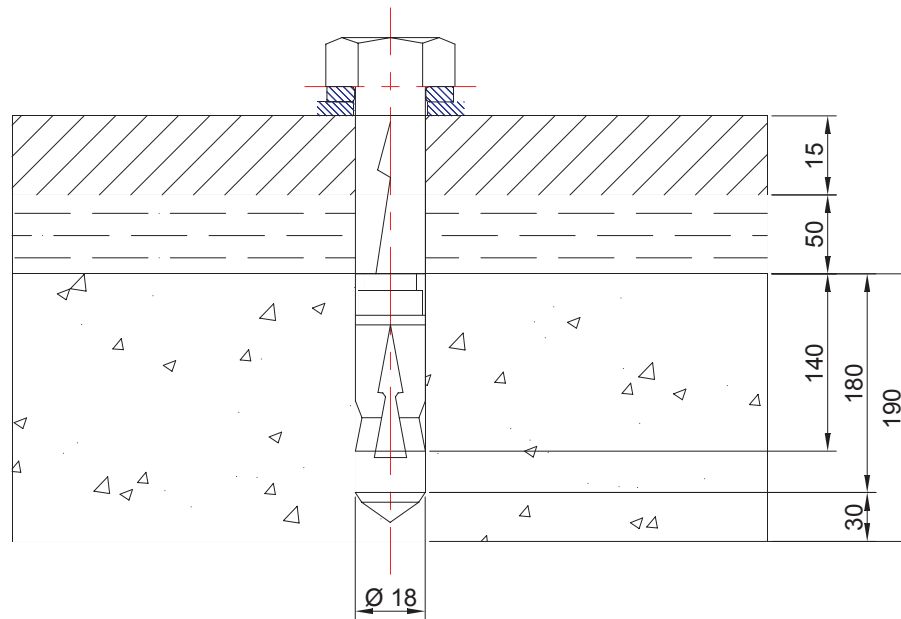
- the arms for reaching the maximum height;
- the lifting limit switch will operate;

5.5.2 On Load checks

Repeat checks provided for by 7.5.1 section with the vehicle loaded;

5.5.3 Bolts and nuts check

After carrying out the checks with load, make a visual inspection of the machine and check bolts and nuts for proper tightening.



5.6 Limit switches adjustments

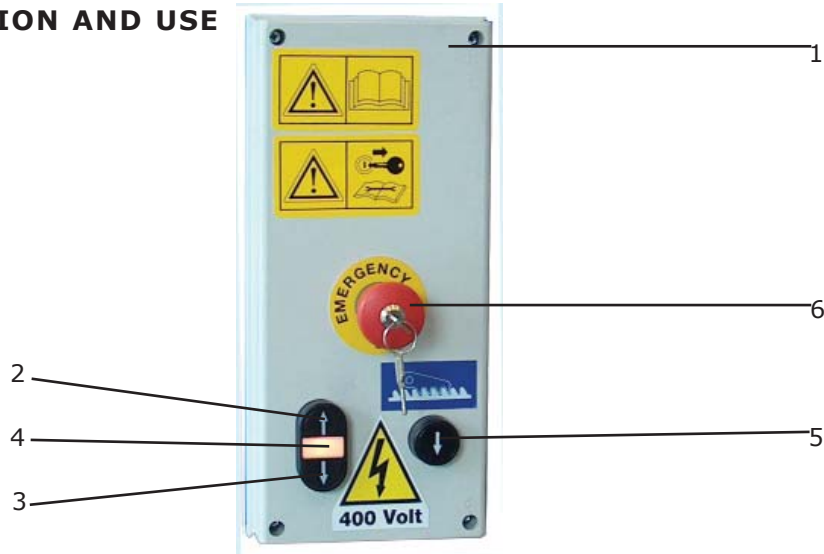


ONLY SKILLED PERSONNEL MUST BE ALLOWED TO CARRY OUT THIS OPERATION. AN IMPROPER ADJUSTMENT OF LIMIT SWITCHES COULD CAUSE DAMAGES TO THE LIFT, OBJECTS AND PEOPLE.

Top limit switch has a working wide field and are adjusted by the factory. In case of improper functioning, it is possible making the adjustment

6 OPERATION AND USE

6.1 Controls



Controls for operating the lift are:

UP BUTTON (2)

When pressed, motor and air solenoid valve are operated and the arms can be raised.

DOWN BUTTON (3)

If it is pushed it will act, the lowering solenoid valve and the air allowing the lowering of the arms.

STANDING BUTTON (5)

If it is pushed, it operates the standing of the arms in this way:

- Activates the discharging solenoid valve that activates mechanical safeties.

BE SURE THE SAFETY AREA IS FREE FROM PEOPLE AND OBJECTS



Lift operation can be summarized into four steps:

6.2 Vehicle positioning

Place the vehicle between the columns. Place arms pads under the positions fixed by the motor vehicle's manufacturer for lifting.

6.3 Lifting

Press UP button to lift the vehicle to the required level.

6.4 Standing

To let the lift stand, press the standing and safety height switch (5) when the required position is reached.

6.5 Lowering

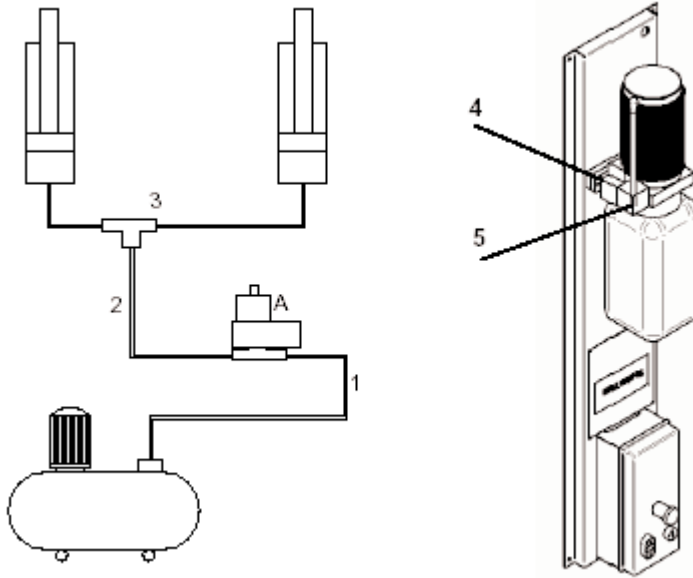
For making the lowering we have to push the UP button in order to unblock the mechanical safeties, then leave the UP button and keep pushed the **DOWN** button.

6.6 Manual and emergency lowering

In case of power supply cutting off or a failure in the control box , lower the lift manually to its initial position as follows:

- blow air directly into the pneumatic circuit to let mechanical safety be released
- If mechanical safeties are still operated, pour oil in the hydraulic circuit by means of the manual pump (5) to release them.
- Unscrew metallic hood of the lowering solenoid valve(4)
- Restore the initial conditions for use the lift.

MANUAL LOWERING



7 MAINTENANCE



ONLY TRAINED PERSONNEL WHO KNOWS HOW THE LIFT WORKS, MUST BE ALLOWED TO SERVICE THE LIFT.

To service properly the lift, the following must be taken into account:

- use only genuine spare parts as well as equipment suitable for the work required;
- follow the scheduled maintenance and check periods shown in the manual;
- discover the reason for possible failures such as too much noise, overheating, oil blow-by, etc.
- Refer to documents supplied by the dealer to carry out maintenance:
- functional drawing of the electric and hydraulic equipment provided for;
- exploded views with all data necessary for spare parts ordering;
- list of possible faults and relevant solutions.



BEFORE CARRYING OUT ANY MAINTENANCE OR REPAIR ON THE LIFT, DISCONNECT THE POWER SUPPLY, PADLOCK THE GENERAL SWITCH AND KEEP THE KEY IN A SAFE PLACE TO PREVENT UNAUTHORIZED PERSONS FROM SWITCHING ON OR OPERATING THE LIFT.

7.1 Ordinary maintenance

The lift has to be properly cleaned at least once a month. Use self-cleaning clothes.



THE USE OF WATER OR INFLAMMABLE LIQUID IS STRICTLY FORBIDDEN

Be sure the rod of the hydraulic cylinders is always clean and not damaged since this may result in leakage from seals and, as a consequence, in possible malfunctions.

7.2 Periodical maintenance

Every 3 months

Hydraulic circuit

- check oil tank level; refill with oil, if needed;
- check the circuit for oil leakage. Check seals for proper conditions and replace them, if necessary;

Foundation bolts:

- check bolts for proper tightening

Hydraulic pump

- verify that no noise changes take place in the pump of the control desk when running and check fixing bolts for proper tightening

Safety system

- check safety devices for proper operation

Every 6 months

Oil

- check oil contamination level and aging.

Months

First cause of improper working of solenoid valves and short life of pump gears is contaminated oil itself.

General check

- verify that carpentry and mechanical components are not damaged

Every 12 months

Electrical system

- a check of the electrical system to verify that control desk motor, limit switches and control panel operate properly must be carried out by skilled electricians.

7.3 Recommended hydraulic oil

Recommended hydraulic oil for the lift to be used at standard temperatures (25°-30°) is described below. For temperatures different from those standard, contact your dealer for suitable oil.

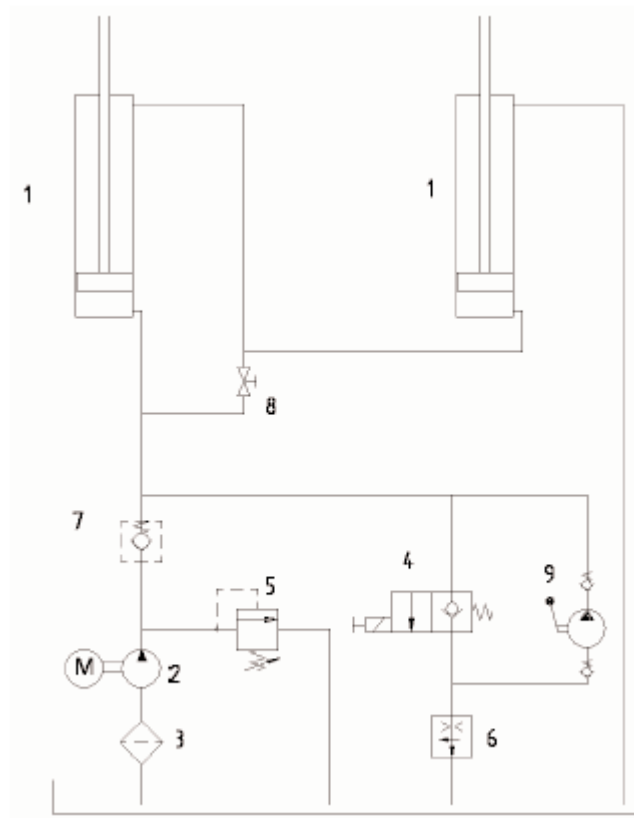
BRAND	TYPE
AGIP	OSO 32
API	CIS 32
BP	HLP 32
CASTROL	HYSPIN HWS 32
ELF	ELFONA DS 32
ESSO	NUTO H 32
FIAT	HTF 32
FINA	HYDRAN TS 32
IP	HYDRUS 32
Q8	HAYDYN 32
MOBIL	DTE 24
ROL	OIL LI 32
SHELL	TELLUS OIL 32
TOTAL	AZOLLA ZS 32



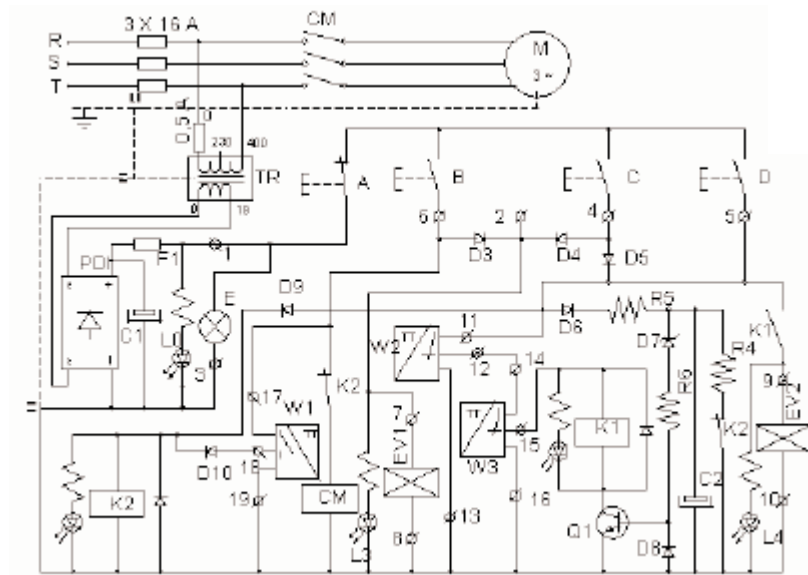
REPLACE HYDRAULIC OIL EACH 5 YEARS

HYRAULIC DIAGRAM

- 1 Piston
- 2 Pump
- 3 Filter
- 4 Lowering valve
- 5 Max pressure valve
- 6 Lowering regulator
- 7 Non return valve
- 8 Leveling Rubinetto
- 9 Manual pump

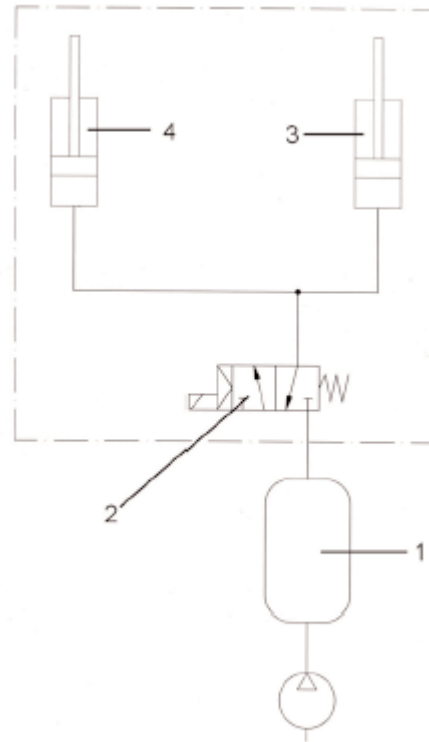


- A EMERGENCY BUTTON
- B LIFTING BUTTON
- C LOWERING BUTTON
- D SAFETY BUTTON
- E EMERGENCY PUSH BUTTON
- W1 MAXIMUM HEIGHT LIMIT SWITCH
- PDI LOOKED CEL
- CM THERMISCHE PROTECTION
- W2 P1 OBSTAKEL SAFETY SENSOR
- W3 P2 OBSTAKEL SAFETY SENSOR
- EV1 AIR VALVE
- EV2 LOWERING VALVE
- TR TRANSFORMER
- M MOTOR 3pH
- F1 FUSE



8 PNEUMATIC SYSTEM PLAN

- 1 Tank
- 2 Solenoid valve
- 3 Pneumatic cylinder P1
- 4 Pneumatic cylinder P2



9. CONFORMITY

AUTEC Hefbruggen b.v.
Vlasakker 11
NL 3417 XT Montfoort
The Netherlands

Declares hereby that lifftype:

