

MIKAR0CL00920



O.M.E.R. N.A. Inc.
2300 Speers Road,
Oakville, ON. L6L 2X8

KAR140CL

KAR170CL

KAR190CL

KAR230CL

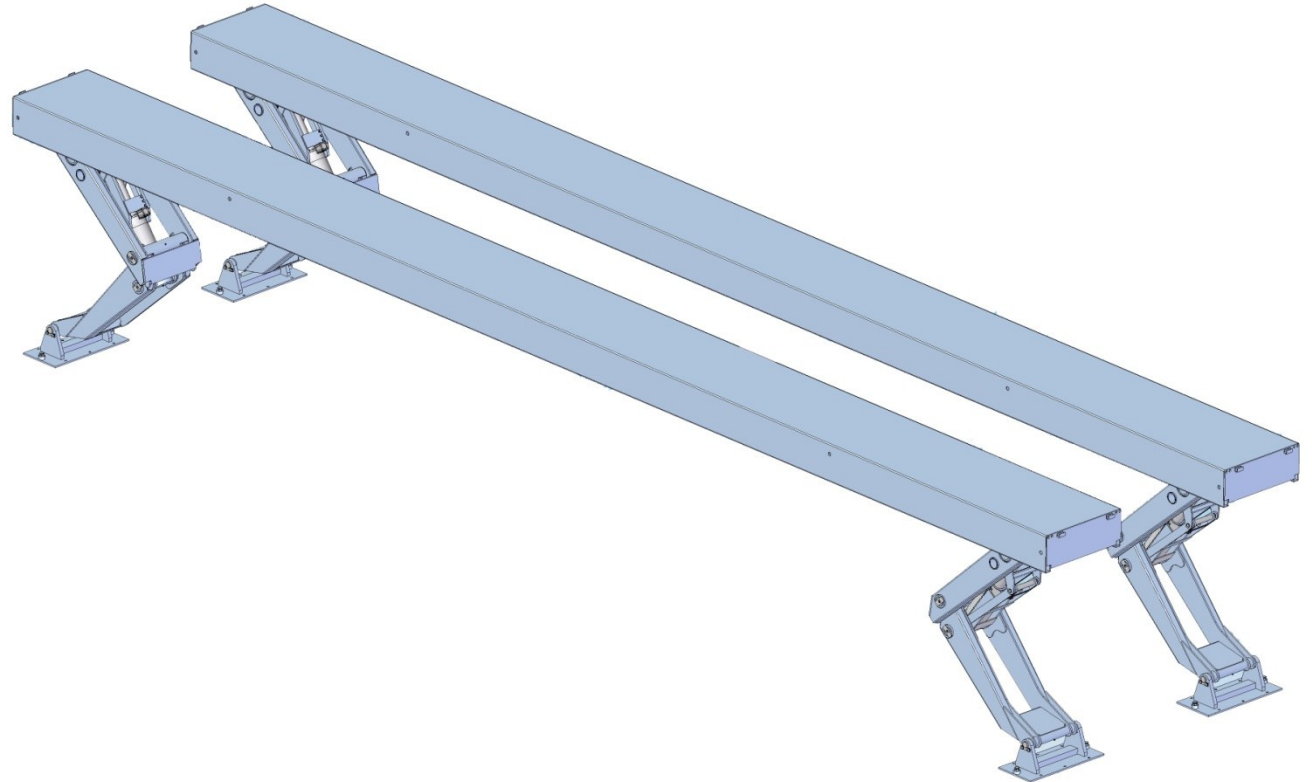
KAR290CL

-X-M

X=7,8,9,10,11

Noiselevels 70dB(A)

OPERATION AND MAINTENANCE MANUAL







CAUTION



*“Before proceeding with installation, operating, servicing,
or maintain the lift, the user must read the manual carefully...”*



INDEX ENGLISH

	1. GENERAL INFORMATION 1-1
1.1.	MARKING DATA 1-1
1.2.	ASSISTANCE 1-1
1.3.	DESCRIPTION OF PERSONNEL 1-2
	2. DESCRIPTION OF THE MACHINE 2-1
2.1.	TECHNICAL DATA 2-1
2.2.	NOMENCLATURE 2-1
2.3.	OVERALL DIMENSIONS 2-1
2.4.	LOADING CONDITIONS 2-2
	3. SAFETY 3-1
3.1.	EXPECTED USE 3-1
3.2.	GENERAL SAFETY REGULATIONS 3-1
3.3.	PRECAUTION 3-2
3.4.	IMPROPER USE 3-1
3.5.	SAFETY DEVICE FEATURES 3-2
3.6.	RESIDUAL RISKS 3-3
3.7.	STICKERS AND PLATES 3-4
	4. INSTALLATION 4-1
4.1.	TRANSPORT AND HANDLING 4-1
4.2.	PLACE OF INSTALLATION 4-3
4.3.	CONNECTING THE LIFT 4-4
4.4.	CONNECTING THE LIFT'S COMMANDS 4-4
4.4.1.	<i>Hydraulic connections</i> 4-4
4.4.2.	<i>Pneumatic connection</i> 4-6
4.4.3.	<i>Electric connection</i> 4-6
4.5.	FILLING OF THE CIRCUIT MASTER-SLAVE 4-8
4.6.	LIFT POSITION 4-9
4.7.	CHECK 4-10
4.8.	ANCHORAGE CAPSULE INSTALLATION 4-11



4.9.	CHECKS BEFORE USE 4-12
4.10.	FINAL TESTING ERRORE. IL SEGNALIBRO NON È DEFINITO.

	5. USE 4-1
5.1.	OPERATION COMMANDS 4-1
5.2.	USE ADVICE 4-3
	6. MAINTENANCE 6-1
6.1.	ORDINARY/EXTRAORDINARY MAINTENANCE 6-1
6.2.	TABLE ADJUSTMENT PROCEDURES 6-3
6.2.1.	<i>Maximum pressure valve calibration</i> 6-3
6.2.2.	<i>Photocell</i> 6-4
6.2.3.	<i>Parachute valve</i> 6-5
6.2.4.	<i>Platforms levelling</i> 6-6
6.2.5.	<i>Unblocking safety locks</i> 6-7
6.2.6.	<i>Bleeding air from the volumetric circuit</i> 6-7
6.3.	SAFETY MANOEUVRES 6-8
6.4.	ABNORMAL OPERATION 6-9
7.	ACCESSORIES 7-1

1. GENERAL INFORMATION

1.1. *Marking data*

Table identification plate:

		OMER. s.p.A. Via Galileo Galilei, 20 30035 MIRANO (VENEZIA) Italy Tel. 041.5700303 - Fax 041.5700273 E-mail: info@omerlift.com - www.omerlift.com		 Made in Italy	
SERIAL Nr.					
MAX HYDRAULIC PRESS. :	psi	RATINGS —	:	HP	AD00001607
MAX AIR PRESS. :	psi		:	V	
MAX CAPACITY :	Lb		:	3 PH - 60 Hz	
YEAR OF MANUFACTURE :			:	A	

1.2. *Assistance*

Please use the following contact details for assistance requests :

OMER N.A. Inc.

PHONE: 877-799-LIFT(5438)

FAX: 905-891-1214

Email: sales@KarLiftSolutions.com

1.3. *Description of personnel*

TERMS AND DEFINITIONS

- OPERATOR/SPECIALISED TECHNICIAN:
the person(s) appointed to:
 - install,
 - set up,
 - adjust
 - perform maintenance on,
 - clean,
 - repair
 - transport the lift.
 - perform certain maintenance operations that require specific preparation and expertise in the mechanics, electrical, electronic, oil-hydraulic and pneumatic fields.

The specialised technician is aware of any risks present on the machine and the procedures to be followed to avoid damage to his/herself or others during such maintenance operations.

- EXPOSED PERSON: any person wholly or partly in a hazardous area.

- HAZARDOUS OR RISKY AREA: any area inside and/or close to a machine in whose presence an exposed person constitutes a risk for his/her health and safety.

- USER: anyone who buys or possesses the lift in any way (on loan, hire, lease, etc.), with the intention of using it as indicated by the manufacturer.

- MAINTENANCE: all activities, which shall be done to keep the system in efficiency and in good condition.



2. DESCRIPTION OF THE MACHINE

Addressees:

- USER;
- OPERATOR / SPECIALISED TECHNICIAN.

2.1. Technical data

LIFT CAPACITY	KAR140CL	KG	14060
		Lb	31,000
	KAR170CL	KG	16783
		Lb	37,000
	KAR190CL	KG	19050
		Lb	42,000
	KAR230CL	KG	23133
		Lb	51,000
	KAR290CL	KG	29030
		Lb	64,000

MOTOR POWER	KW	7,5	
	HP	10	
ELECTRIC POWER SUPPLY	V	220-240	THREE-PHASE
		440-480	
	Hz	60	
TOTAL ABSORBED CURRENT MAX	A	32.2	
		30.8	
		28.0	
		18.0	
		14.0	
		11.0	

PNEUMATIC POWER SUPPLY	bar	8	Filtered and lubricated
	psi	116	

MAXIMUM PRESSURE OF HYDRAULIC POWER SUPPLY	KAR140CL	bar	170
		psi	2466
	KAR170CL	bar	190
		psi	2756
	KAR190CL	bar	210
		psi	3046
	KAR230CL	bar	240
		psi	3481
	KAR290CL	bar	260
		psi	3771

QUANTITY OF OIL	LT	40
UPSTROKE/DOWNSTROKE TIME	S	70 / 80
MIN/MAX OPERATING TEMPERATURE	°C	-10° ÷ +40
SOUND EMISSION LEVEL	db(A)	< 80

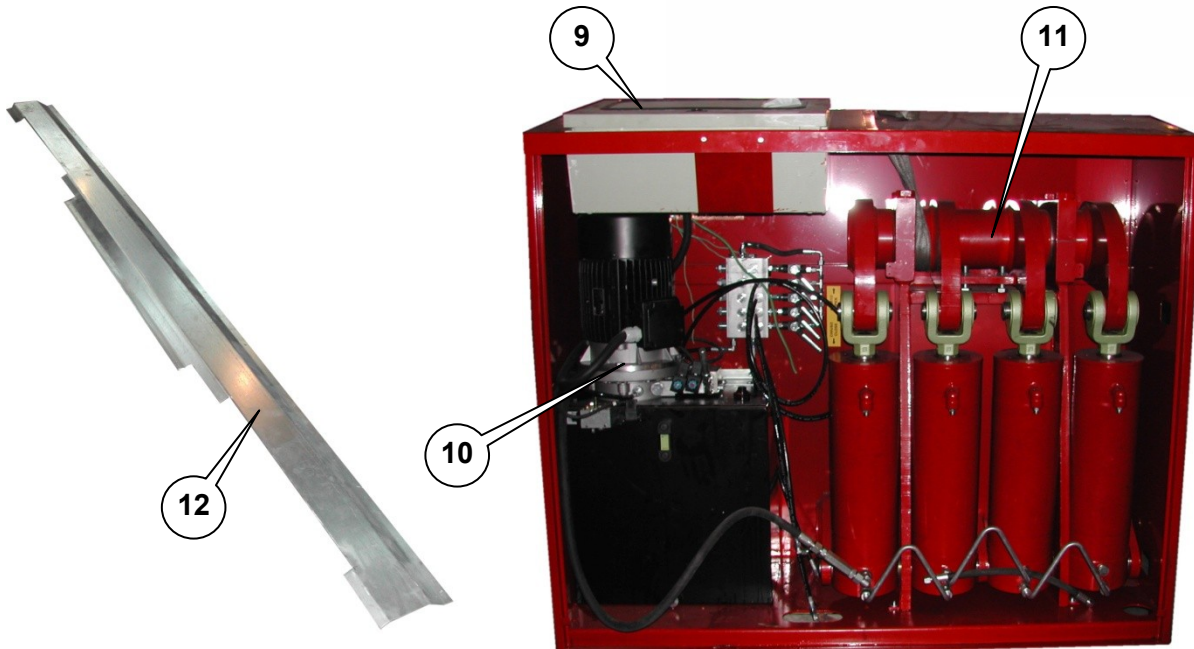
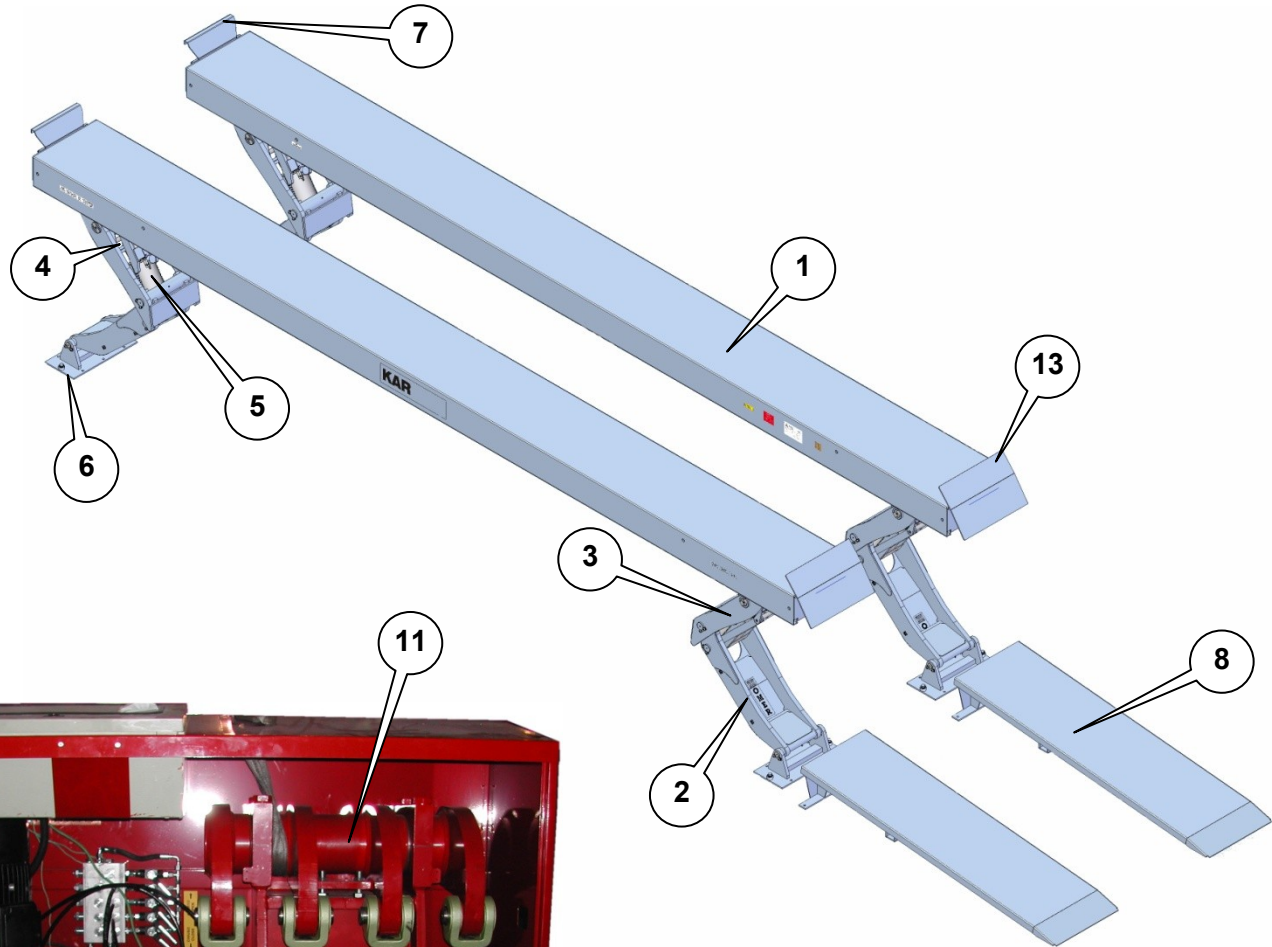
2.2. Nomenclature

MODELS LEGEND :

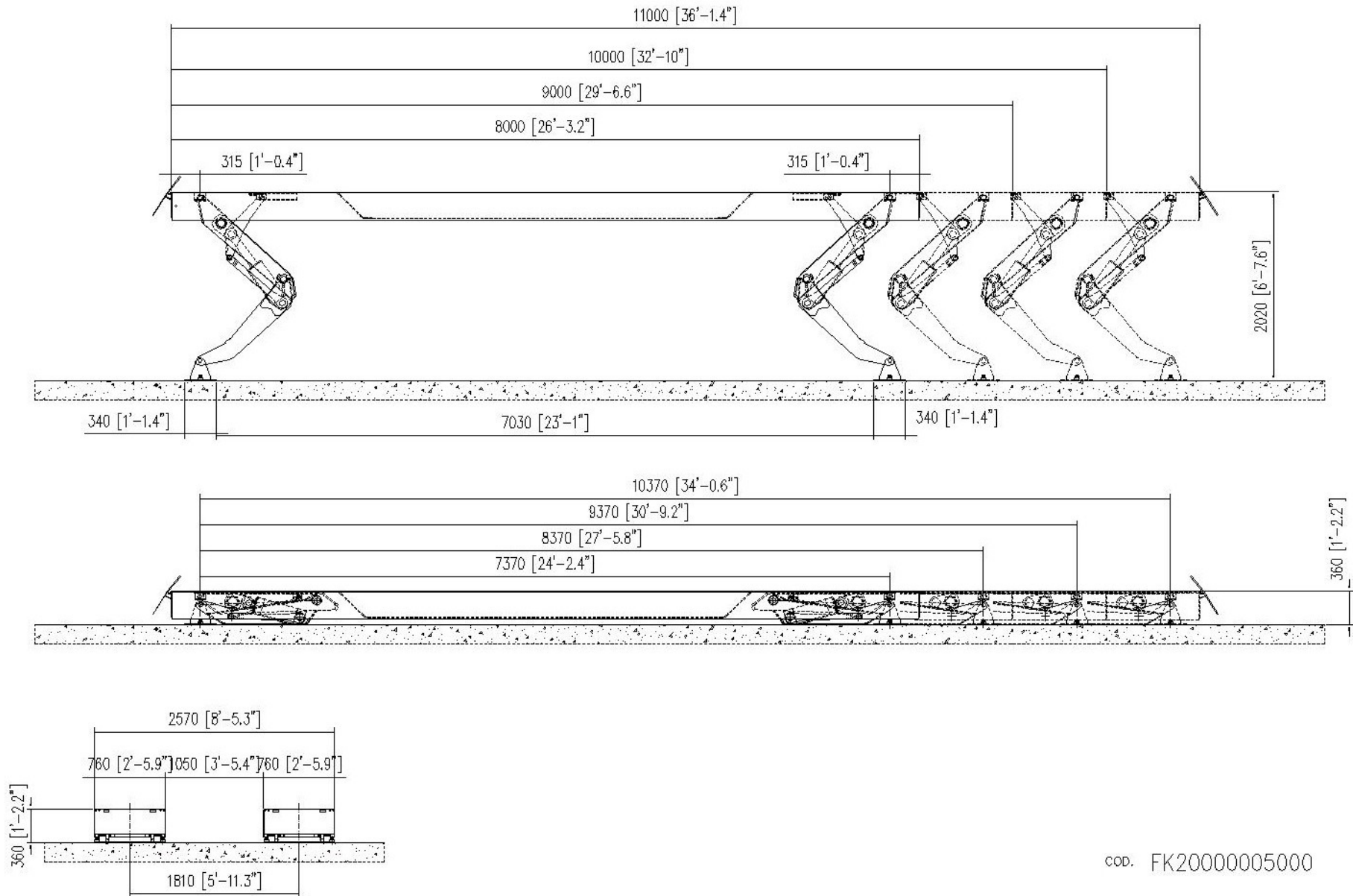
N	STANDALONE VERSION (SMOOTH TRAVEL)
I	RECESS-MOUNTED VERSION

NOTE: UNITS ARE FOR INDOOR USE ONLY

N°	DESCRIPTION
1	Platform
2	Lower leg
3	Upper lever
4	Tension rod
5	Hydraulic cylinder (main lift)
6	Base plate
7	Wheel stop
8	Access ramps
9	Electrical Controls
10	Hydraulic Pump
11	Flow divider
12	Protective floor pipe covers
13	Ramp cover plate








2.3. Overall dimensions



cod. FK20000005000

2.4. Loading conditions

KAR140CL	KAR170CL	KAR190CL	KAR230CL	KAR290CL
Capacity 31,000 lb	Capacity 37,000 lb	Capacity 42,000 lb	Capacity 51,000 lb	Capacity 64,000 lb
<div data-bbox="80 722 450 1034"> <p>WARNING</p> <p>MAXIMUM LIFT CAPACITY IS 31,000 LBS DO NOT OVERLOAD</p>  <p><small>AD00001743</small></p> </div>	<div data-bbox="470 722 840 1034"> <p>WARNING</p> <p>MAXIMUM LIFT CAPACITY IS 37,000 LBS DO NOT OVERLOAD</p>  <p><small>AD00001744</small></p> </div>	<div data-bbox="887 722 1256 1034"> <p>WARNING</p> <p>MAXIMUM LIFT CAPACITY IS 42,000 LBS DO NOT OVERLOAD</p>  <p><small>AD00001745</small></p> </div>	<div data-bbox="1281 722 1650 1034"> <p>WARNING</p> <p>MAXIMUM LIFT CAPACITY IS 51,000 LBS DO NOT OVERLOAD</p>  <p><small>AD00001746</small></p> </div>	<div data-bbox="1697 722 2067 1034"> <p>WARNING</p> <p>MAXIMUM LIFT CAPACITY IS 64,000 LBS DO NOT OVERLOAD</p>  <p><small>AD00001747</small></p> </div>

3. SAFETY

Addressees:

- USER;
- OPERATOR / SPECIALISED TECHNICIAN.

3.1. *Expected use*

The function of the vehicle lift is to lift motorized vehicles, which have the distribution of the loading according norms in force.
Only move the vehicle on the lift in the fully down position.
The accessories indicated in the relating chapter can be used.

3.2. *General safety regulations*



For quick reference by operator, this manual must:

- be kept in a well known, easily accessible place
- be kept in good condition

Before proceeding with installation and use of the machine, the user must read the manual carefully, especially the safety rules.

CAUTION






“Before proceeding with installation, operating, servicing, or maintain the lift, the user must read the manual carefully...”

The machine should be used by authorised, trained personnel only.
The user (owner and/or employee) must make sure that the fitter has provided:






- all accessories
- the spares provided with the lift
- this operation and maintenance manual


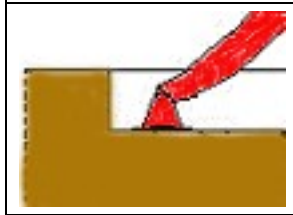




Use as described in this manual only.
Always use the accessories recommended by the manufacturer.
O.ME.R. N.A. declines all responsibility for non-compliance with the indications given in this manual

The main safety rules are shown below:

	<p>Read all instructions carefully</p>
	<p>Put the main switch to the zero position when the machine is not in use. Never pull the electric cable to remove the plug from the socket.</p>
	<p>To reduce the risk of fires, avoid using the lift close to open drums of inflammable liquid (such as gas oil) and/or in explosive environments.</p>
	<p>Make sure the work area is adequately aired when using internal combustion engines.</p>
	<p>Avoid contact between parts of the body and/or clothing and moving parts.</p>

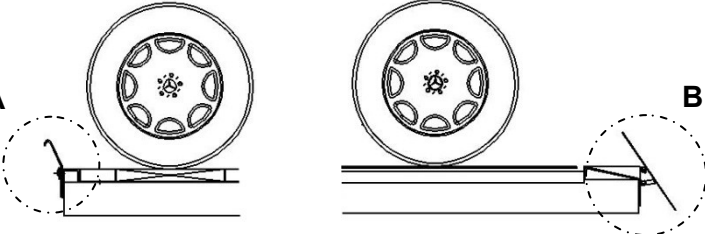
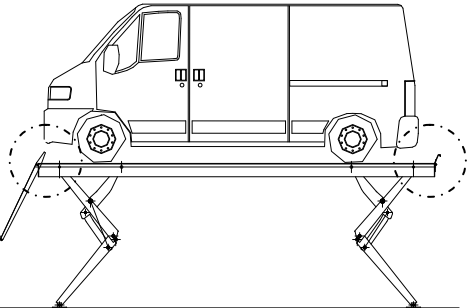
3.3. Precaution

	<p>When loading the lift never exceed the capacity shown on the ID plate on the lift.</p>
	<p>⚠ DANGER</p> <p>Never lift people.</p>
	<p>Any modifications to the lift must be authorised by the manufacturer.</p>
	<p>The equipment must be used by specifically trained and authorised personnel only.</p>
	<p>Do not tamper with the lift's upstroke and downstroke.</p>

	<p>Always check the stability of hoisted vehicle.</p>
	<p>In case of "recess-mounted version" before carrying out the final lowering with bypass key, please ensure you that all personell are clear of the lift.</p>
	<p>⚠ DANGER</p> <p>Do not use the lift in the event of hindrances to operation or hazardous conditions.</p>
	<p>⚠ WARNING</p> <p>Check the lift carefully after long periods of inactivity before putting it back into service.</p>
	<p>The lift comes complete with an instruction manual warning labels designed to last. Ask the manufacturer for a replacement immediately if damaged or destroyed.</p>
	<p>O.ME.R. N.A. declines responsibility for any inconvenience deriving from non-compliance with the instructions for use.</p>

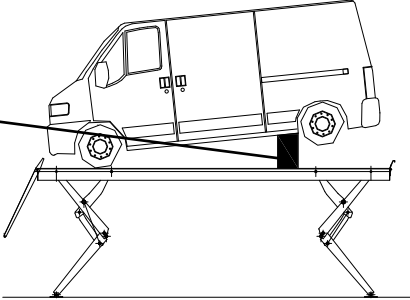
3.4. **IMPROPER USE**

⚠ DANGER



NEVER remove the wheel stop (A) and the union platform (B). They prevent the vehicle from coming off the platform.

NEVER lift vehicles using equipment other than that envisaged by the manufacturer.



NEVER lift vehicles that are only partially on the lift.

3.5. Safety device features

SAFETY DEVICE	COMPOSED OF	POSITION	IN THE EVENT OF ...	EFFECT ON MAIN LIFT
MECHANICAL ANTI-FALL DEVICE	Rack jack	On each hydraulic cylinder of the lift.	Leakage on the hydraulic circuit or breakage of a component	Accidental descent is blocked with a maximum displacement of 4 inch.
ANTI-SHEARING DEVICE	Limit switch and buzzer	On the master cylinder in the control unit.	Descent on last stretch	Platform descent stops at 19.6 inches off the ground To complete descent: ✓ turn the PEFT key switch. ✓ Hold down the Down Button PD 1. Final descent is confirmed by the buzzer.
PLATFORM ALIGNMENT CONTROL DEVICE	Photocell and reflectors	Each end of the platforms	Maximum misalignment of 2 inches between the platforms of the main or auxiliary lift.	The lift stops moving.
HYDRAULIC FAILURE DEVICE	Velocity fuse	On each hydraulic cylinder of the lift and on MASTER cylinder supply.	Breakage of hoses.	The valve blocks descent when the speed reaches a value preset by the Manufacturer.
WHEEL STOP DEVICES	Wheel chock and ramp cover plate	Front and rear in both lift platforms.	-	They prevent the vehicle from coming off the platforms.
SIGNALS	Stickers and plates	See paragraph: <i>Stickers and plates</i>	-	Draw attention to residual risks and precautions for use.

3.6. *Residual risks*



HAZARD	WHO	CONDITION	RISK
PIPE BREAKING	Maintenance technician	MAINTENANCE	Contact with high pressure oil on rupture.
ELECTRIC SHOCK	Maintenance technician	MAINTENANCE	Contact with live components
PERSONAL INJURED	Maintenance technician	MAINTENANCE	Shearing of hands and feet with lift is in movement.

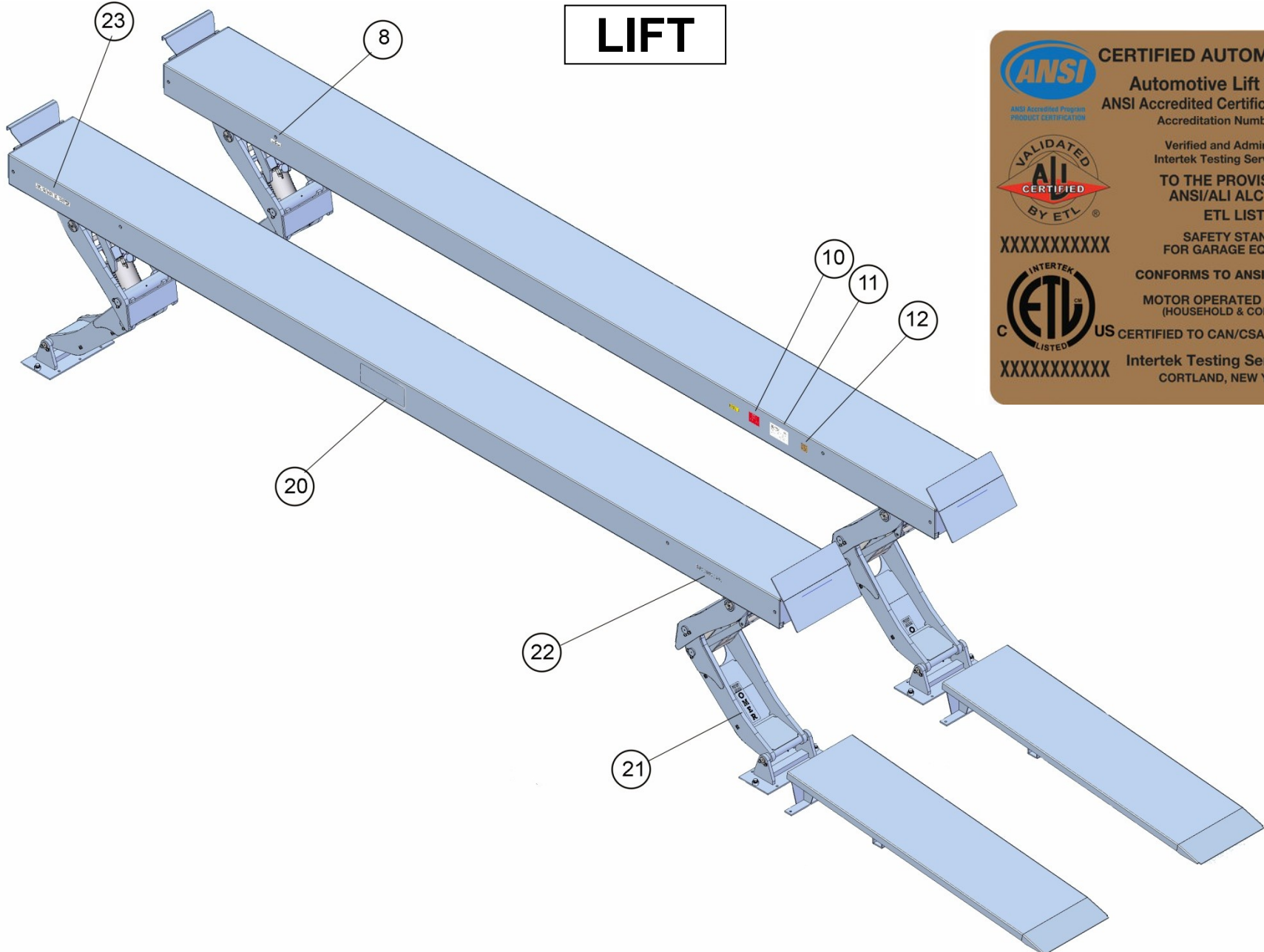
3.7. *Stickers and plates*

The labels must be readable and permanently attached to the equipment.

The labels that will be furnished with the equipment, together with their relevant positions, listed below:

N.	Plate description		
1	Control panel identification		
2	Risk of electric shock		
3	Risk of explosion		
4	Risk of fire		
5	Fuses indication		
8	Air attachment		
10	Load distribution		
11	Serial number plate		
12	GOLD LABEL CODE	LIFT	
		CONTROL UNIT	
13	Operating time		
14	Safety instruction (GB)		
16	Warning		
17	Earth connection		
18	Duty cycle time (GB)		
20	Logo KARCL		
21	Logo OMER		
22	MAX CAPACITY		
23	Do not stay near the lift in movements		

LIFT



ANSI CERTIFIED AUTOMOTIVE LIFT
ANSI Accredited Program
 PRODUCT CERTIFICATION

Automotive Lift Institute
ANSI Accredited Certification Program
 Accreditation Number 0584

Validated
ALI
 CERTIFIED
 BY ETL

XXXXXXXXXXXX

ETL
INTERTEK
 LISTED

XXXXXXXXXXXX

US CERTIFIED TO CAN/CSA STD C22.2 NO.68

Intertek Testing Services NA Inc.
 CORTLAND, NEW YORK 13045

Verified and Administered by
 Intertek Testing Services NA Inc.

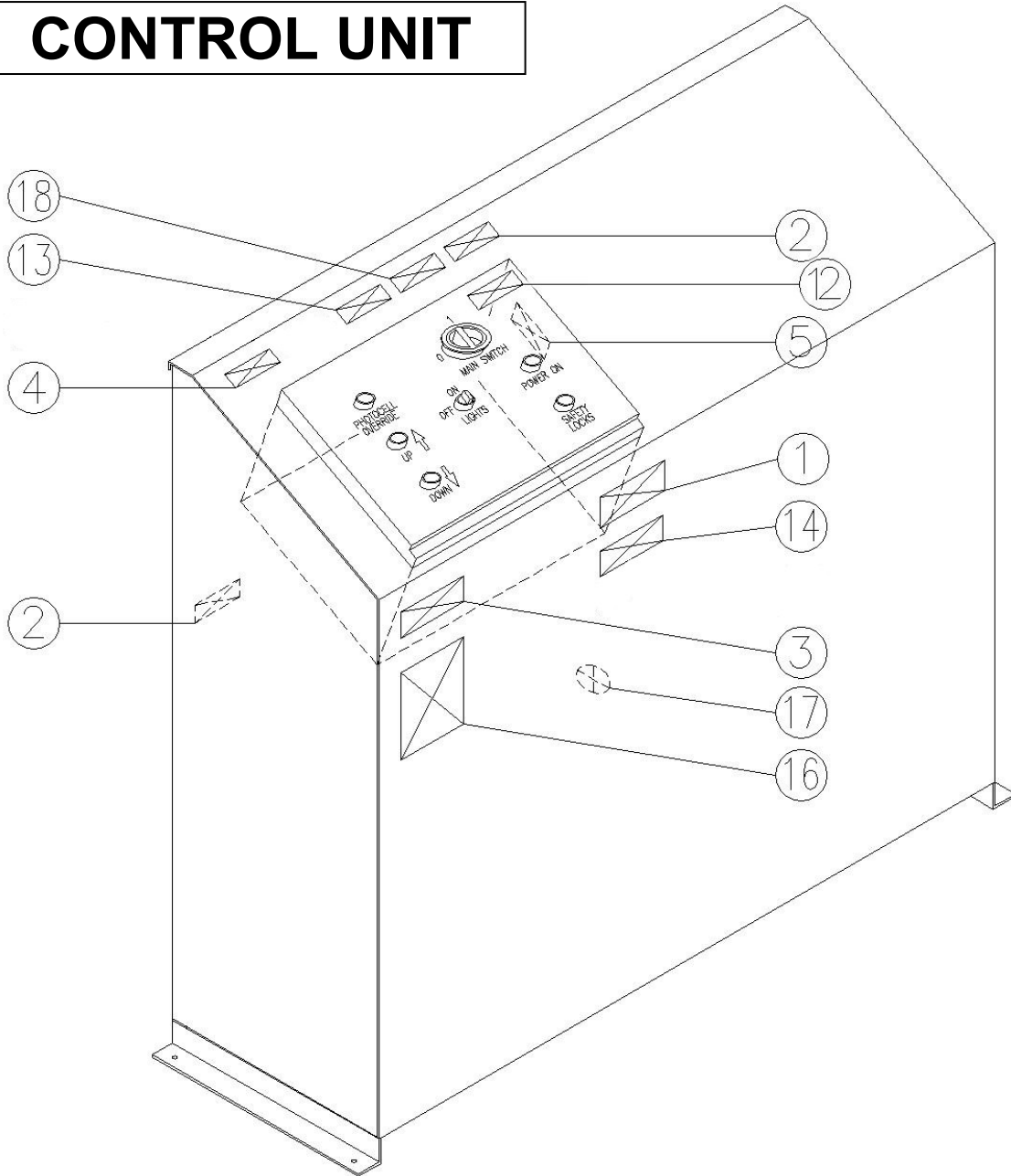
**TO THE PROVISIONS OF
 ANSI/ALI ALCTV-2011**
ETL LISTED

**SAFETY STANDARD
 FOR GARAGE EQUIPMENT**

CONFORMS TO ANSI/U.L. STD 201

**MOTOR OPERATED APPLIANCES
 (HOUSEHOLD & COMMERCIAL)**

CONTROL UNIT



ANSI CERTIFIED AUTOMOTIVE LIFT
ANSI Accredited Program
 PRODUCT CERTIFICATION

Automotive Lift Institute
ANSI Accredited Certification Program
 Accreditation Number 0584

VALIDATED
ALI
CERTIFIED
 BY ETL

XXXXXXX

ETL
INTERTEK LISTED

XXXXXXX

Verified and Administered by
 Intertek Testing Services NA Inc.

TO THE PROVISIONS OF
ANSI/ALI ALCTV-2011
ETL LISTED


SAFETY STANDARD
FOR GARAGE EQUIPMENT

CONFORMS TO ANSI/U.L. STD 201






MOTOR OPERATED APPLIANCES
 (HOUSEHOLD & COMMERCIAL)




US CERTIFIED TO CAN/CSA STD C22.2 NO.68

Intertek Testing Services NA Inc.
 CORTLAND, NEW YORK 13045

<p>LABEL 1</p>	 <p>IDENTIFICATION:</p> <p>CATALOG PART NR.</p> <p>ELECT. RATINGS</p> <p>MANUFACTURED ON</p> <p>Tel. 041.5700303 - Fax 041.5700273 OMER SPA - ITALY</p>
<p>LABEL 2</p>	<p>“CAUTION: RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.”</p> <p style="text-align: right;">AD00000488</p>
<p>LABEL 3</p>	<p>“WARNING: RISK OF EXPLOSION. THIS EQUIPMENT HAS INTERNAL ARCING OF SPARKING PARTS WHICH SHOULD NOT BE EXPOSED TO FLAMMABLE VAPORS. IT SHOULD NOT BE LOCATED IN A RECESSED AREA OR BELOW FLOOR LEVEL.”</p> <p style="text-align: right;">AD00000490</p>

<p>LABEL 4</p>	<p>“CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH THE SAME TYPE A, V FUSE. REFER SERVICING TO QUALIFIED PERSONNEL.”</p> <p style="text-align: right;">AD00000489</p>
<p>LABEL 5</p>	<p>“IF CONNECTED TO A CIRCUIT PROTECTED BY FUSES, USE TIME-DELAY FUSES WITH EQUIPMENT.”</p> <p style="text-align: right;">AD00000491</p>
<p>LABEL 8</p>	<p style="text-align: center;">AIR ATTACHMENT</p> <p style="text-align: right;">AD00000449</p>

LABEL 10	KAR140CL	
	KAR170CL	
	KAR190CL	
	KAR230CL	
	KAR290CL	

LABEL 11	 <p>OMER S.p.A. Via Galileo Galilei, 20 30035 MIRANO (VENEZIA) Italy Tel. 041.5700303 - Fax 041.5700273 E-mail: info@omerlift.com - www.omerlift.com</p> <p>Made in Italy</p>
LABEL 12	 <p>CERTIFIED AUTOMOTIVE LIFT Automotive Lift Institute ANSI Accredited Certification Program Accreditation Number 0584</p> <p>Verified and Administered by Intertek Testing Services NA Inc.</p> <p>TO THE PROVISIONS OF ANSI/ALI ALCTV-2011 ETL LISTED</p> <p>SAFETY STANDARD FOR GARAGE EQUIPMENT</p> <p>CONFORMS TO ANSI/U.L. STD 201</p> <p>MOTOR OPERATED APPLIANCES (HOUSEHOLD & COMMERCIAL)</p> <p>US CERTIFIED TO CAN/CSA STD C22.2 NO.68</p> <p>Intertek Testing Services NA Inc. CORTLAND, NEW YORK 13045</p>
LABEL 13	 <p><u>KAR CL</u></p> <p>OPERATING TIME: 80 SECONDS</p> <p>DUTY CYCLE TIME: 10 MINUTES</p> <p>AD00001754</p>

LABEL 14

SAFETY INSTRUCTIONS: (GB)

IF ATTACHMENTS, ACCESSORIES, OR CONFIGURATION MODIFYING COMPONENTS THAT ARE LOCATED IN THE LOAD PATH, AFFECT OPERATION OF THE LIFT, AFFECT THE LIFT ELECTRICAL LISTING, OR AFFECT INTENDED VEHICLE ACCOMMODATION ARE USED ON THIS LIFT AND, IF THEY ARE NOT CERTIFIED FOR USE ON THIS LIFT, THEN THE CERTIFICATION OF THIS LIFT SHALL BECOME NULL AND VOID. CONTACT THE PARTICIPANT FOR INFORMATION PERTAINING TO CERTIFIED ATTACHMENTS, ACCESSORIES, OR CONFIGURATION MODIFYING COMPONENTS.

AD00000949

LABEL 16

Automotive Lift Institute, Inc.

CAUTION

Lift to be used by trained operator ONLY.

CAUTION

Authorized personnel only in lift area.

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.

Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.

www.autolift.org ©1992 by ALI, Inc. ALIWL200s

WL200 Series Label Kit

WARNING

Clear area if vehicle is in danger of falling.

WARNING

Remain clear of lift when raising or lowering vehicle.

Keep clear of pinch points when lift is moving.

Keep feet clear of lift while lowering.

SAFETY INSTRUCTIONS

Read operating and safety manuals before using lift.

SAFETY INSTRUCTIONS

Proper maintenance and inspection is necessary for safe operation.

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.

Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.

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SAFETY INSTRUCTIONS

Do not operate a damaged lift.

WARNING

Do not override self-closing lift controls.

LABEL 17

LABEL 18


DUTY CYCLE TIME

10 MINUTES

AD00000946

KAR140CL	KAR 140CL
KAR170CL	KAR 170CL
KAR190CL	KAR 190CL
KAR230CL	KAR 230CL
KAR290CL	KAR 290CL

LABEL 20

<p>LABEL 21</p>											
<p>LABEL 22</p>	<p>KAR140CL</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;"> PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT </td> <td style="width: 33%; text-align: center;"> MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX. </td> <td style="width: 33%; text-align: center;"> KG 14060 LBS 31000 </td> </tr> </table>				PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT	MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX.	KG 14060 LBS 31000			
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	<p>KAR170CL</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;"> PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT </td> <td style="width: 33%; text-align: center;"> MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX. </td> <td style="width: 33%; text-align: center;"> KG 16783 LBS 37000 </td> </tr> </table>				PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT	MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX.	KG 16783 LBS 37000			
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	<p>KAR190CL</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;"> PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT </td> <td style="width: 33%; text-align: center;"> MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX. </td> <td style="width: 33%; text-align: center;"> KG 19050 LBS 42000 </td> </tr> </table>				PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT	MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX.	KG 19050 LBS 42000			
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<p>KAR230CL</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;"> PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT </td> <td style="width: 33%; text-align: center;"> MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX. </td> <td style="width: 33%; text-align: center;"> KG 23133 LBS 51000 </td> </tr> </table>				PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT	MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX.	KG 23133 LBS 51000				
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<p>KAR290CL</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;"> PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT </td> <td style="width: 33%; text-align: center;"> MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX. </td> <td style="width: 33%; text-align: center;"> KG 29030 LBS 64000 </td> </tr> </table>				PORTATA MAX. PORTEE MAX. MAX. TRAGKRAFT	MAX. CAPACITY CARGA MAX. CAPACIDADE MÁX.	KG 29030 LBS 64000				
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<p>LABEL 23</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 16.6%; text-align: center; font-size: small;"> VIETATO SOSTARE NELLE VICINANZE DEL SOLLEVATORE IN MOVIMENTO </td> <td style="width: 16.6%; text-align: center; font-size: small;"> DEFENSE DE STATIONNER EN PROXIMITÉ DU PONT EN MOUVEMENT </td> <td style="width: 16.6%; text-align: center; font-size: small;"> ES IST VERBOTTEN IN DE NÄHE DER BÜHNE WAHREND DES BETRIEBES ZU BLEIBEN </td> <td style="width: 16.6%; text-align: center; font-size: small;"> DO NOT STAY NEAR THE LIFT IN MOVEMENT </td> <td style="width: 16.6%; text-align: center; font-size: small;"> PROHIBIDO SITUARSE BAJO EL ELEVADOR CUANDO ESTA EN MOVIMIENTO </td> <td style="width: 16.6%; text-align: center; font-size: small;"> PROIBIDO PERMANECER DEBAIXO DO ELEVADOR QUANDO ESTE ESTA EM MOVIMENTO </td> </tr> </table>					VIETATO SOSTARE NELLE VICINANZE DEL SOLLEVATORE IN MOVIMENTO	DEFENSE DE STATIONNER EN PROXIMITÉ DU PONT EN MOUVEMENT	ES IST VERBOTTEN IN DE NÄHE DER BÜHNE WAHREND DES BETRIEBES ZU BLEIBEN	DO NOT STAY NEAR THE LIFT IN MOVEMENT	PROHIBIDO SITUARSE BAJO EL ELEVADOR CUANDO ESTA EN MOVIMIENTO	PROIBIDO PERMANECER DEBAIXO DO ELEVADOR QUANDO ESTE ESTA EM MOVIMENTO
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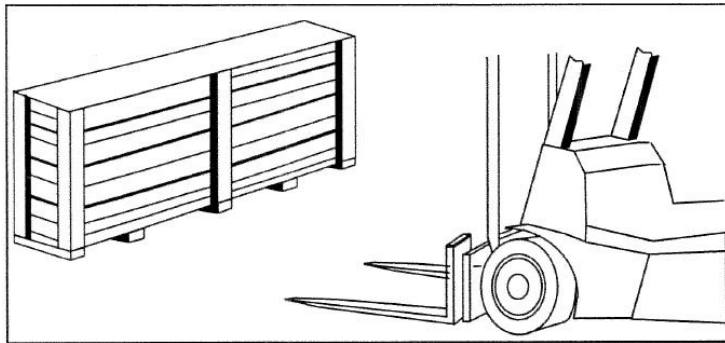
4. INSTALLATION

Addressees:

- OPERATOR / SPECIALISED TECHNICIAN.

4.1. *Transport and handling*

The packaged lift must only be transported using dedicated hoisting equipment with a greater capacity than the lift to be handled.



The equipment is wrapped in bubble pack to protect the components wooden crates or pallets are used in special cases.

PROCEED AS FOLLOWS:

- protect the electric control panel from exposure to the elements
- protect against blows and do not use the electronic control panel for hoisting
- protect the corners and ends of the piece to be transported with suitable material (Bubble pack - cardboard).
- harness using dedicated straps



PACKING LIST

VERSION OF LIFT	WEIGHT		
	Table kg	Control unit kg	Ramps kg
KAR standalone	~ 6000	~ 1000	~ 500
KAR recess-mounted version	~ 6000	~ 1000	/

Data refers to the table with dimensions L=11000 mm.

KAR is usually sent in 4 packages:

- ✓ Right platform
- ✓ Left platform
- ✓ Control unit
- ✓ Accessories

The packages may vary according to:

- the size of the lift;
- the type of shipment;
- the packaging used, subject to customer's request;
- the destination country.

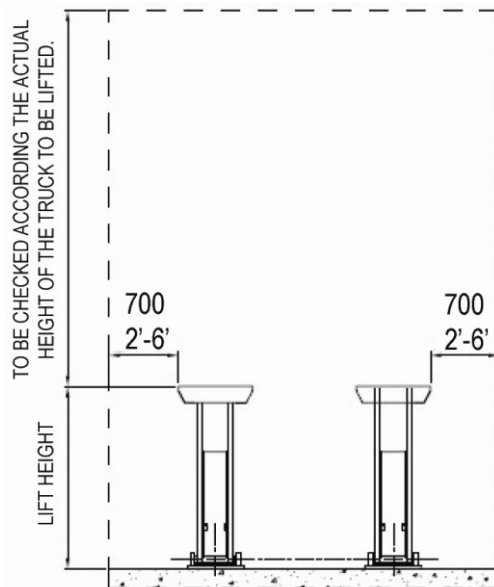
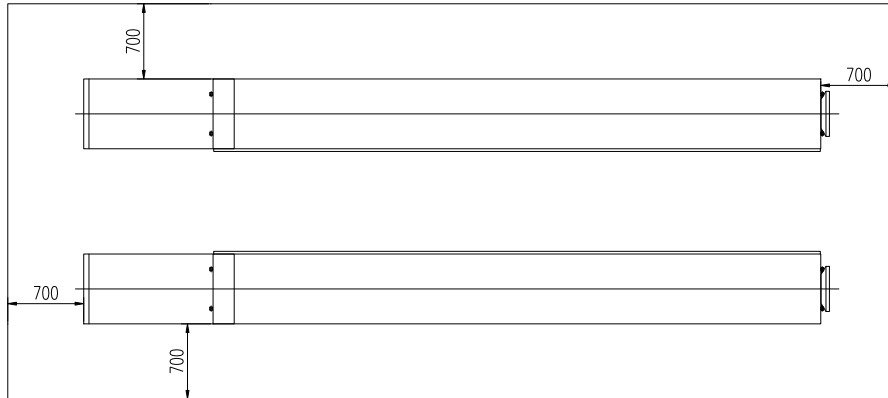


DURING TRANSPORT THE CAGE (OR PACKED LIFT) MUST BE SECURED PROPERLY TO PREVENT IT FROM MOVING AROUND ON THE FLOOR OF THE VEHICLE USED TO TRANSPORT IT.

4.2. Place of installation

The free space around the table must satisfy applicable regulations and be no less than 700 mm or 27,5 inches.

The control unit must be positioned so that the operator has a full view over the lift area.



WORK AT A ROOM
TEMPERATURE OF
-10 TO 40 ° C.
14 TO 104 ° F

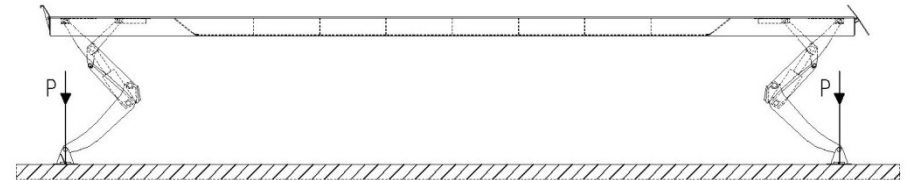
(Indoor use only)
(Not approved for outdoor use)

To install the anchor capsules, the foundation must have the following characteristics:

FOUNDATION	Tamped
THICKNESS OF CONCRETE	≥ 20 cm / 8 inches
CONCRETE RESISTANCE CLASS	≥ C 25 / 4000 psi
IMPROVED ADHERENCE STEEL GIRDERS	Type FeB 44 K
REINFORCEMENT GIRDERS FOR LARGE SURFACES	Electro welded mesh
REINFORCEMENT GIRDERS FOR SMALL SURFACES	Bent irons
FLATNESS	± 1 / 1000

If the floor characteristics are not available, foundations must be provided underneath the lift's clamping holes.

“Ensure a qualified person should be consulted to address seismic loads and other local or state requirements”.



MAX.GROUND PRESSURE (*)	Kg/cm ²	≤ 5
	psi	70

The lift must in any case be fastened to the floor using dedicated chemical anchor capsules.

(*) press calculated under the base plates.

4.3. Connecting the lift

Follow the sequence of operations given below:

1. connect the hoses provided, which lead out of the control unit with their respective inputs to the lift
(see paragraphs: *Hydraulic, pneumatic, electrical connection*).
2. Fill the circuit MASTER/SLAVE and remove air from the same circuit.
(see paragraphs: *Filling of the circuit Master-Slave*)
3. Fix the legs of the lift with the raw plugs at the correct distance and perfectly levelled.
(see paragraphs: *Lift position and Anchorage capsule installation*)
4. Carry out all due tests before using the lift.
(see paragraphs: *Check and Checks before use*)

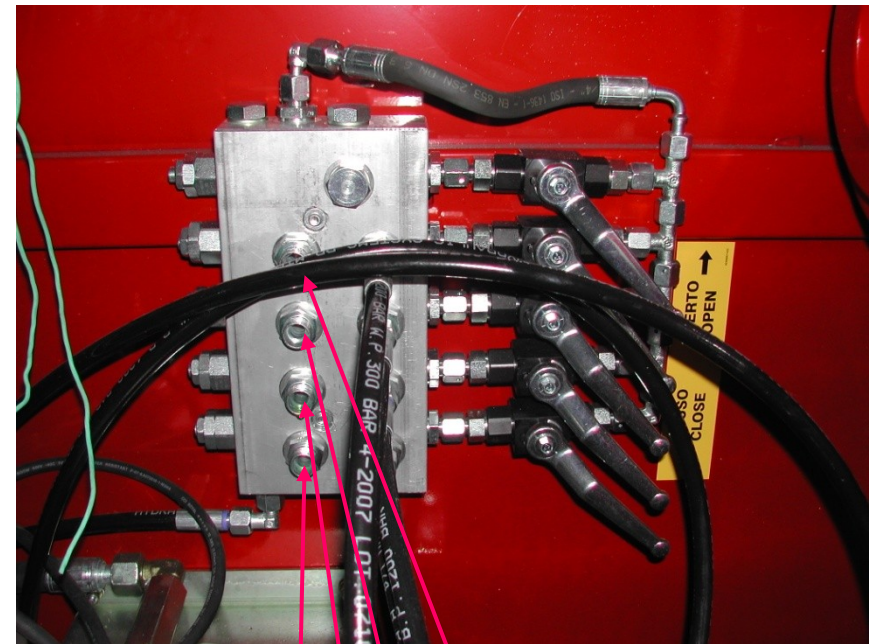
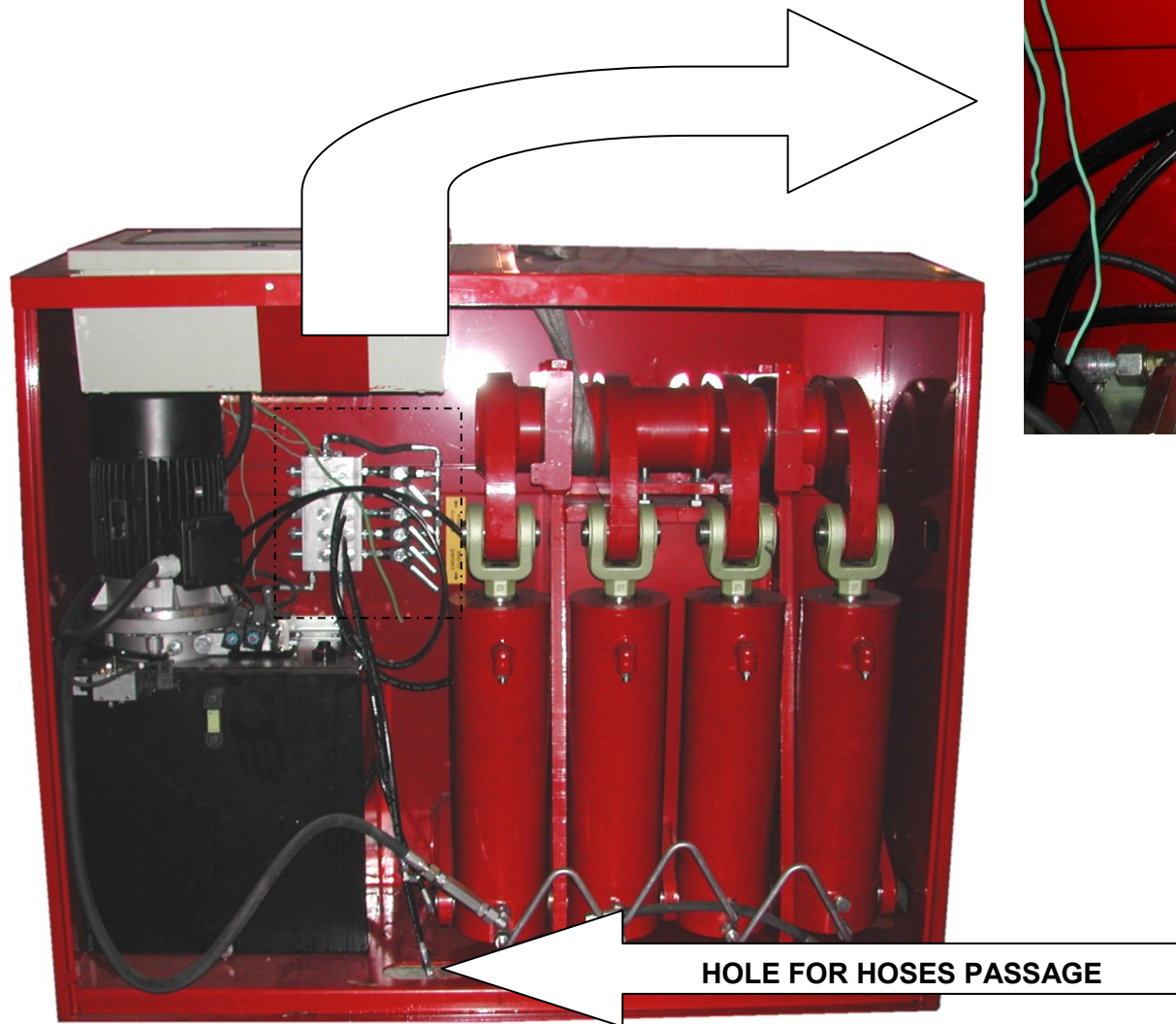
The control unit must be positioned so that the operator has a full view over the lift area.

4.4. Connecting the lift's commands

4.4.1. Hydraulic connections

- Open the control unit door
- Bring the hydraulic hoses from the lift to the control unit, through the hole at the base of the control unit.
- Join the hoses to the hydraulic blocks respecting the numbering (see photo).

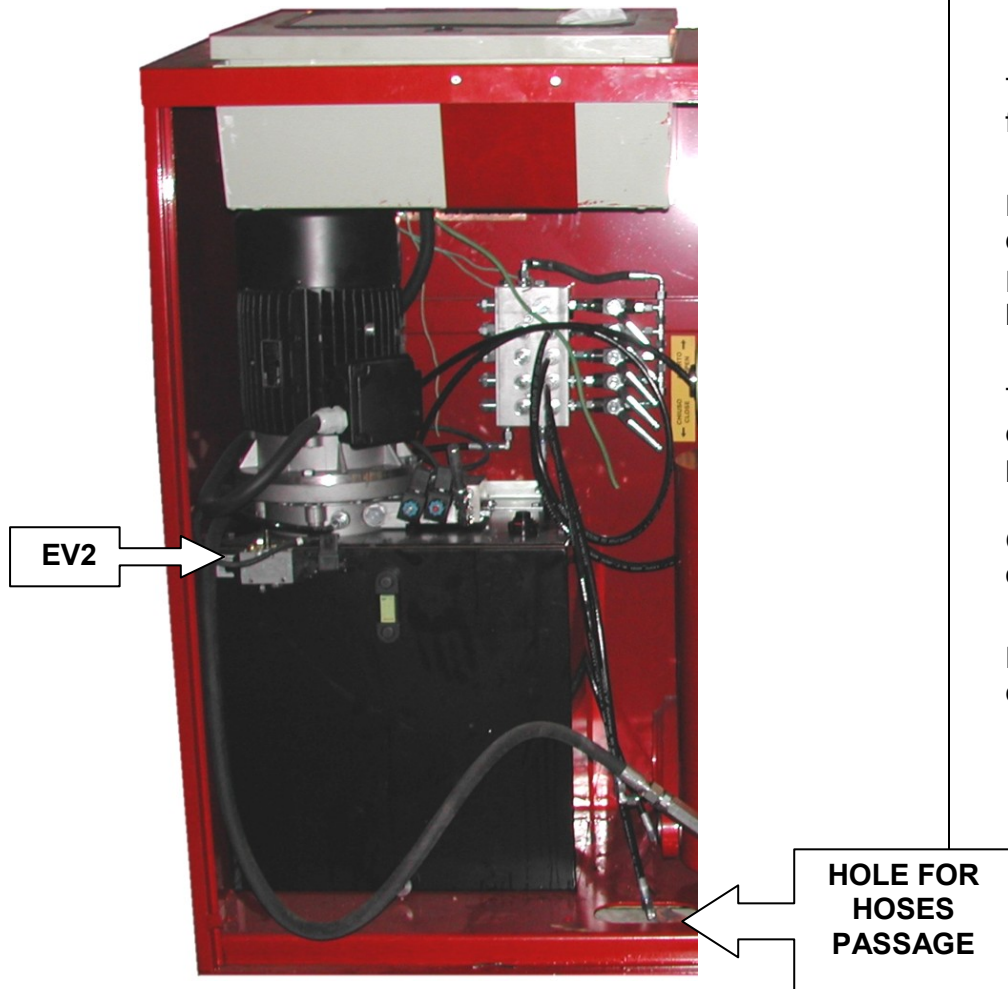




JOIN THE HOSES
RESPECTING THE
NUMBERING

4.4.2. Pneumatic connection

- Uncoil the pneumatic hose connected to EV2.
- Bring the pneumatic hose from the control unit to the lift, through the hole at the base of the control unit.
- Join the hoses from the platform with the hose from the control unit with a tee-coupling.



4.4.3. Electric connection

The electric supply system must include:

- a main switch with a circuit breaker;
- fuses or thermal magnet protection suited to the machine's characteristics;
- device against accidental contact, for protection.

The switch must be positioned in the immediate vicinity of the machine in full compliance with local accident prevention regulations.

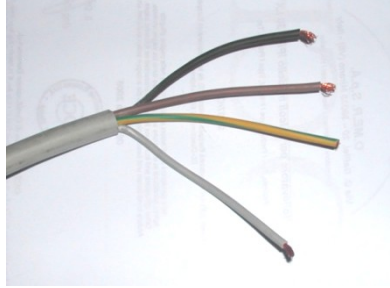
Power cables must have a suitable section for absorbing current, without deviations for other utilities.

Elec System shall be designed to meet all local / national codes and shall be properly grounded.

The power cable must be locked in the dedicated cable gland and the electric panel must be carefully closed to assure the envisaged IP 54 protection.

Only connect the machine to type approved sockets with an earth cable of proven efficiency.

Periodically have qualified personnel check the correct tightening of the electric cables of the various components.



The electric power cable should be AWG12 wire at least.

The supply line must be sized to avoid voltage drop larger than 2% of the main supply voltage.

Attention:

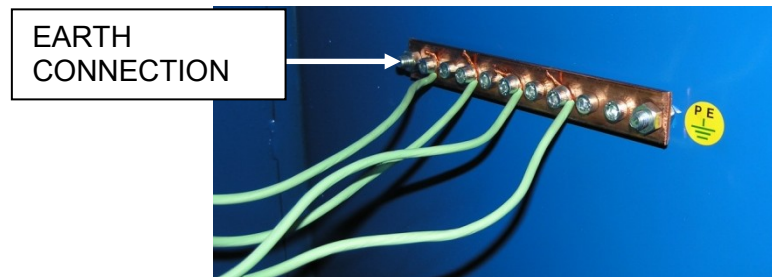
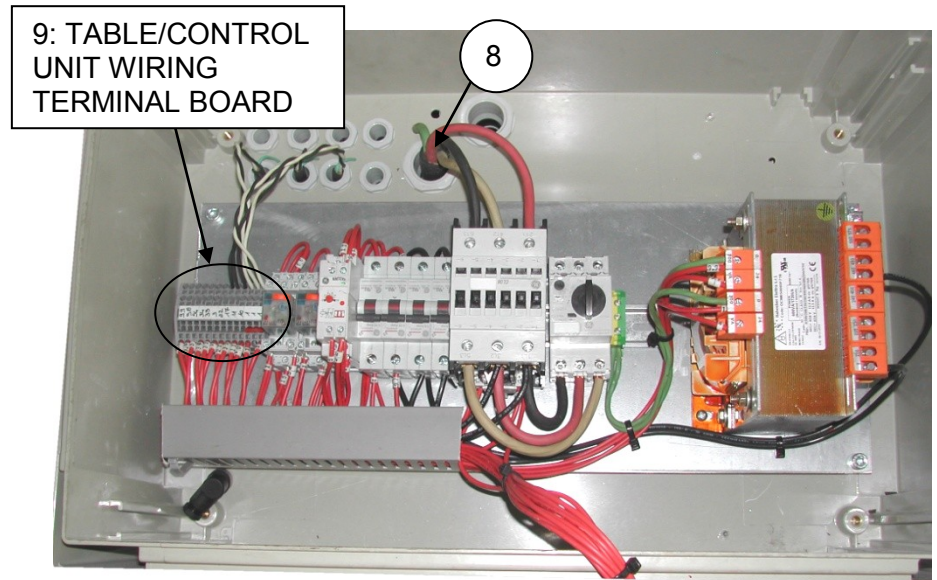
- power the lift's electrics system using a line fitted with a mains switch and without any other junctions.
- The devices fitted to provide protection against short circuits must take into account the features of the electrical equipment:

NOMINAL POWER		HP	10	10	10	10	10	10
VOLTAGE		V	200	208	220-240	380-415	440-480	550-575
No. of phases			3	3	3	3	3	3
FREQUENCY		Hz	60	60	60	60	60	60
NOMINAL CURRENT		A	32.2	30.8	28.0	18.0	14.0	11.0
PICKUP CURRENT		A	193.2	184.8	168.0	108.0	84.0	66.0
PROTECTION	FUSE (DELAYED)	A	35	35	35	25	25	25
	FUSE (FAST)	A	50	50	50	35	35	35
	THERMOMAGNET	A	50	50	50	32	32	32

Warnings for the installation of electric cables between the control unit and lift:

the connecting cable that powers the safety limits switches on the lift must:

- be adequately protected against the mechanical actions it may be exposed to during use.
- Be passed through the dedicated cable glands (8) and connected to the terminal board (9) inside the electric panel, respecting the numbering of the cable.



4.5. Filling of the circuit Master-Slave

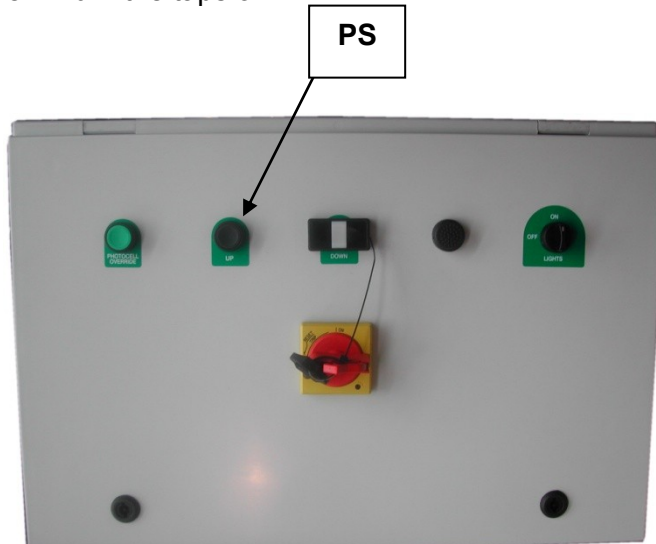
CAUTION

PROCEDURE TO BE EXECUTED ONLY DURING THE INSTALLATION

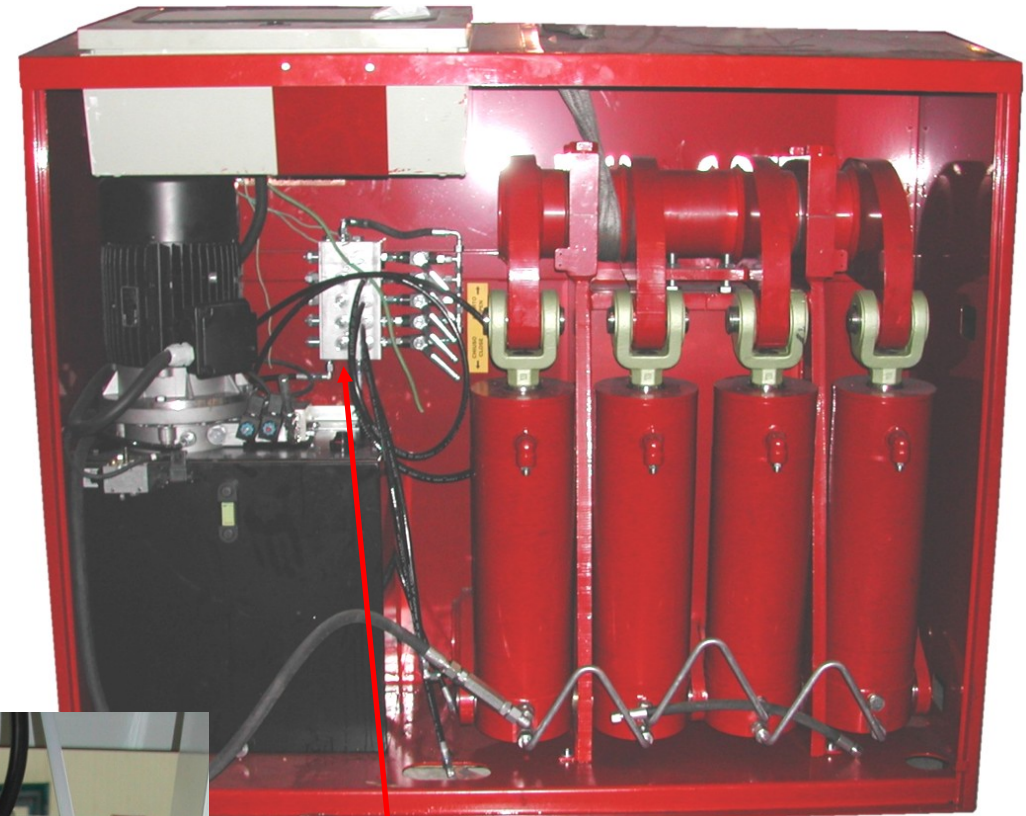
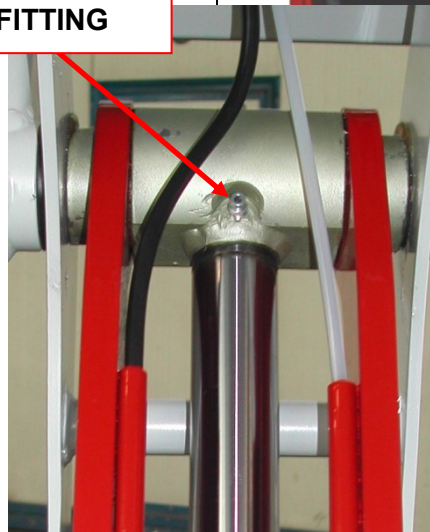
1. Turn the taps on
2. Push button PS /UP till when the lift starts lifting
3. Turn the taps off
4. Push button PS/UP till the complete opening of the divider
5. Turn the taps on
6. For each cylinder:
 - a. Push button Ps/UP till max height of the lift.
 - b. Allow air to escape from the air valve till the lift leans on the mechanical safety locks.
 - c. Repeat at least three times

Repeat point 6 for all cylinders:

7. Push PS/UP till the max height of the lift
8. Turn the taps off



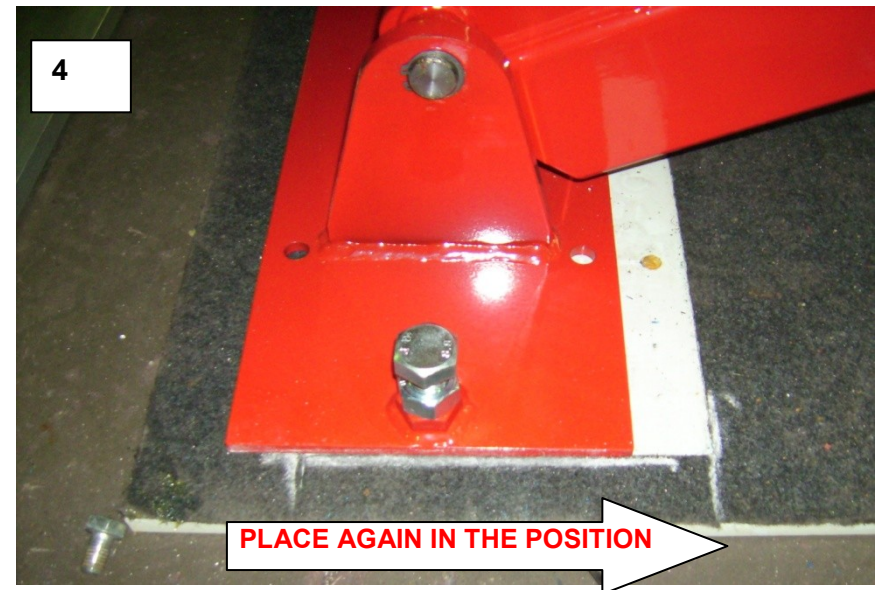
BLEEDING FITTING



TAPS

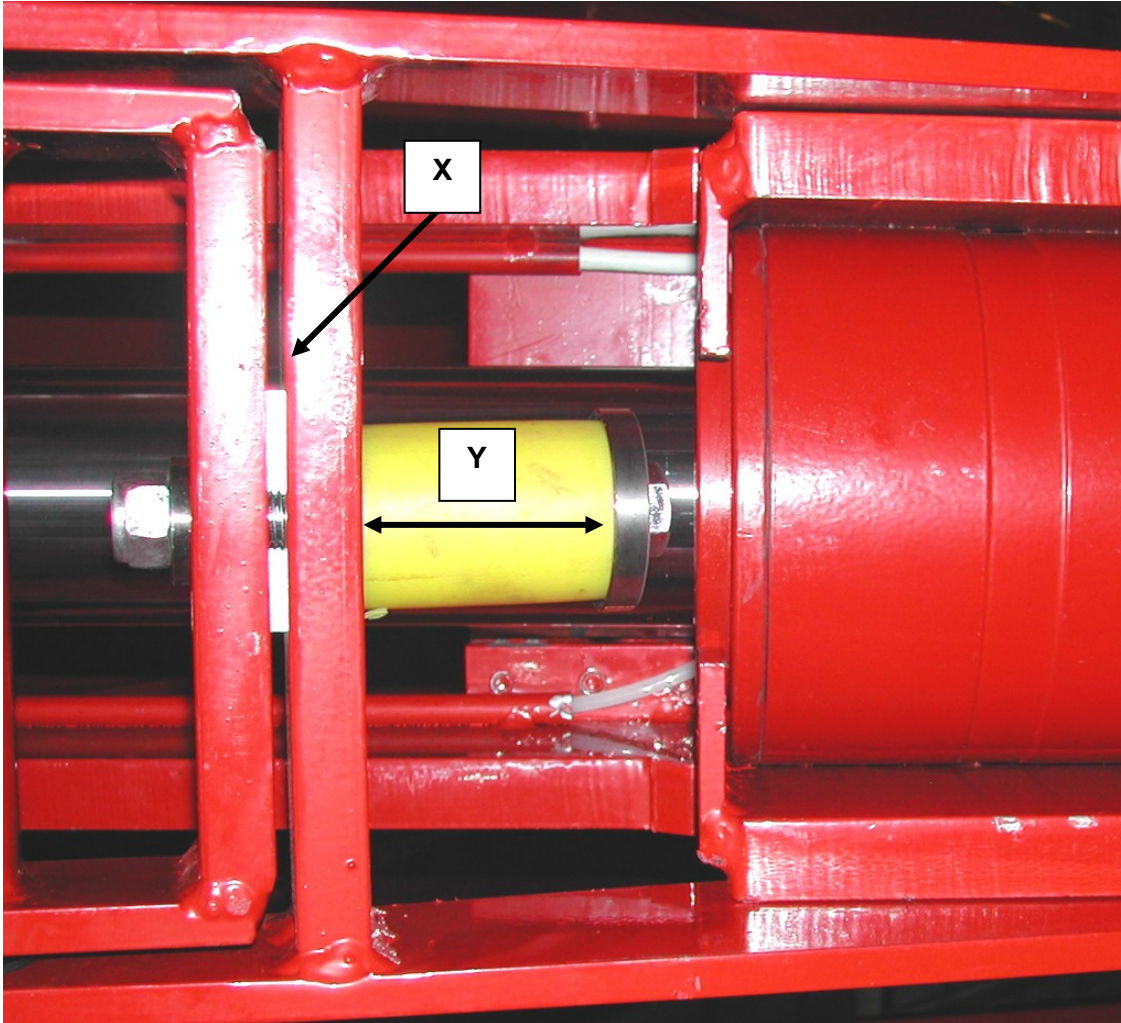
4.6. Lift position

1. Place the lift on floor
 - a. aligned
 - b. in parallel
 2. Mark on floor the position of the base frames
 3. Lifting
- Note: normally the plates move out.
4. For each platform:
 - Put the base frames again in the position alongside the realized line on floor.
 - Fix the frames in the position.
 - Repeat the above-said steps for the other plate



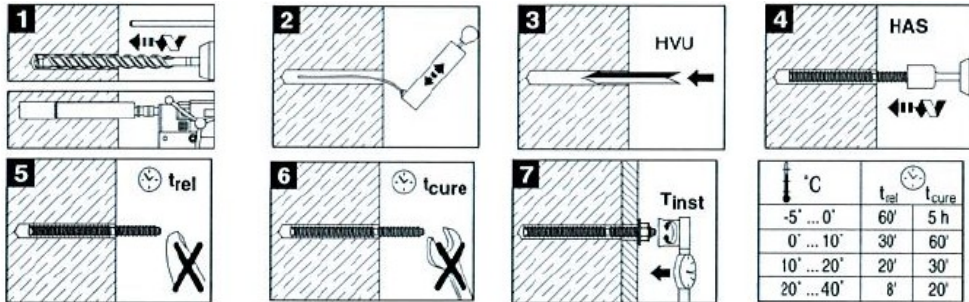
4.7. Check

1. Check that the gap is of $>X$ (6 mm – 1/4" inches).
2. Screw the nut up to the time that the high of the spring is of Y (65 mm – 2.6 inches).

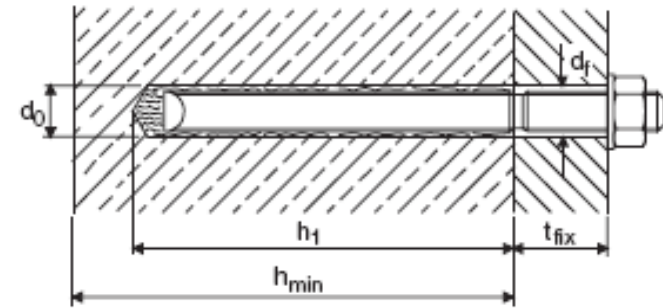


4.8. Anchorage capsule installation

1. Drilling the hole;
2. Clean the inside of the hole;
3. Push the anchor capsule into the drilled hole;
4. Driving the anchor rod into the hole;
5. Waiting for the solidification time (t_{rel});
6. Waiting for the hardening of the compound (t_{cure});
7. Close with the prescribed tightening torque (T_{inst}).



TYPE OF ANCHOR CAPSULE			HVU M16X125
TYPE OF ANCHOR ROD			HAS M16X190
DRILL BIT DIAMETER	d0	mm/inches	18/0.75
MIN. BORE DEPTH	h1	mm/inches	125/5
MIN. THICKNESS OF CONCRETE	h	mm/inches	170/7
LIFT BASE SPACER		mm/inches	38/1.5
HOLE DIAMETER		mm/inches	18/1
TIGHTENING TORQUE	T_{inst}	Nm/ft lbf	100/74
DRILL BIT	TE-T		18-32
NUMBER OF PINS		N°	16 or more



ANCHORAGE CAPSULE POSITION

KAR 200 BASE



A = OBLIGATORY ANCHORAGE CAPSULE

B = OPTIONAL ANCHORAGE CAPSULE
(according to the foundation characteristics and dimension)

4.9. Checks before use

Having completed installation of the table, the following tests must be performed before it can be used for work:

	TESTS	STANDARDS	
1	Table levelling using spirit level.	Max 0.5 mm per meter / 0.006 inches/foot	<input type="checkbox"/>
2	GAP between the plates and the height of the spring.	(see: <i>Check</i>)	
3	Sturdiness of anchors fastening to the floor.	Tightening torque (see: <i>Anchorage capsule installation paragraph</i>)	<input type="checkbox"/>
4	Pneumatic connections.	Diagram (see: <i>Pneumatic diagram paragraph</i>)	<input type="checkbox"/>
		Air leakage	<input type="checkbox"/>
5	Hydraulic connections.	Diagram (see: <i>Hydraulic Diagram paragraph</i>)	<input type="checkbox"/>
		Oil leakage	<input type="checkbox"/>
		Pressure	<input type="checkbox"/>
6	Wiring.	Diagram (see: <i>Wiring Diagram</i>)	<input type="checkbox"/>
7	Safety devices.	(See: <i>Safety device features paragraph</i>)	<input type="checkbox"/>
8	The compressed air system must be powered by filtered and lubricated air	Presence of a filtering system.	<input type="checkbox"/>
9	Oil level.	Oil level rod	<input type="checkbox"/>
10	Direction of rotation of motor.	Arrow on motor	<input type="checkbox"/>
11	Plant cable and piping protection.	Cable and pipe runs provided.	<input type="checkbox"/>
12	In case of upstroke from opposite side to the torsion bar.	Presence of up ramp (optional).	<input type="checkbox"/>
13	Never load vehicles whose overall dimensions exceed those of the lift.	Loading conditions (see paragraph: <i>Loading conditions</i>)	<input type="checkbox"/>
14	Never load vehicles weighing more than the lift's nominal capacity.	Capacity indicated on plate.	<input type="checkbox"/>
DATE		SIGNATURE	

4.10. LIFT OPERATIONAL TEST

4.10.1. Lift Operation

- ✓ Perform pre-operation check list item by item
- ✓ Ensure lift is completely lowered
- ✓ Position vehicle on the lift

4.10.2. Caution

- ✓ Avoid sudden “starts and stops” during loading and unloading of vehicle

4.10.3. To Load a Typical Vehicle

- ✓ Position vehicle on the lift runways by using the approaching ramp. Make sure the center of gravity is located equally between the legs . The individual axle weight should not exceed two-thirds of the lift capacity.
- ✓ Set vehicle parking brake and chock tires.
- ✓ Make sure vehicle is neither front nor rear heavy.

4.10.4. To Raise the Lift

- ✓ Push up button (PS) to raise the lift by about 10”
- ✓ Check for the vehicle movement and weight distribution. Raise to desired height if secure.
- ✓ **DO NOT WORK UNDER A LIFT THAT IS NOT IN THE LOCK POSITION.**

4.10.5. To Lower the Lift

- ✓ Inspect the lifting area to insure all personnel and debris have been cleared away.
- ✓ Push the down button (PDA) and the lift will first disengage the safety locks, then start its decent.
- ✓ Once the lift reaches 120mm from (5 inches) the unit will stop, to allow the operator to check for potential pinch problems. Depress both PDA and PDB to lower the lift to the final lowered position.
- ✓ Lower lift completely to the floor. Carefully drive off the vehicle from the lift runways.

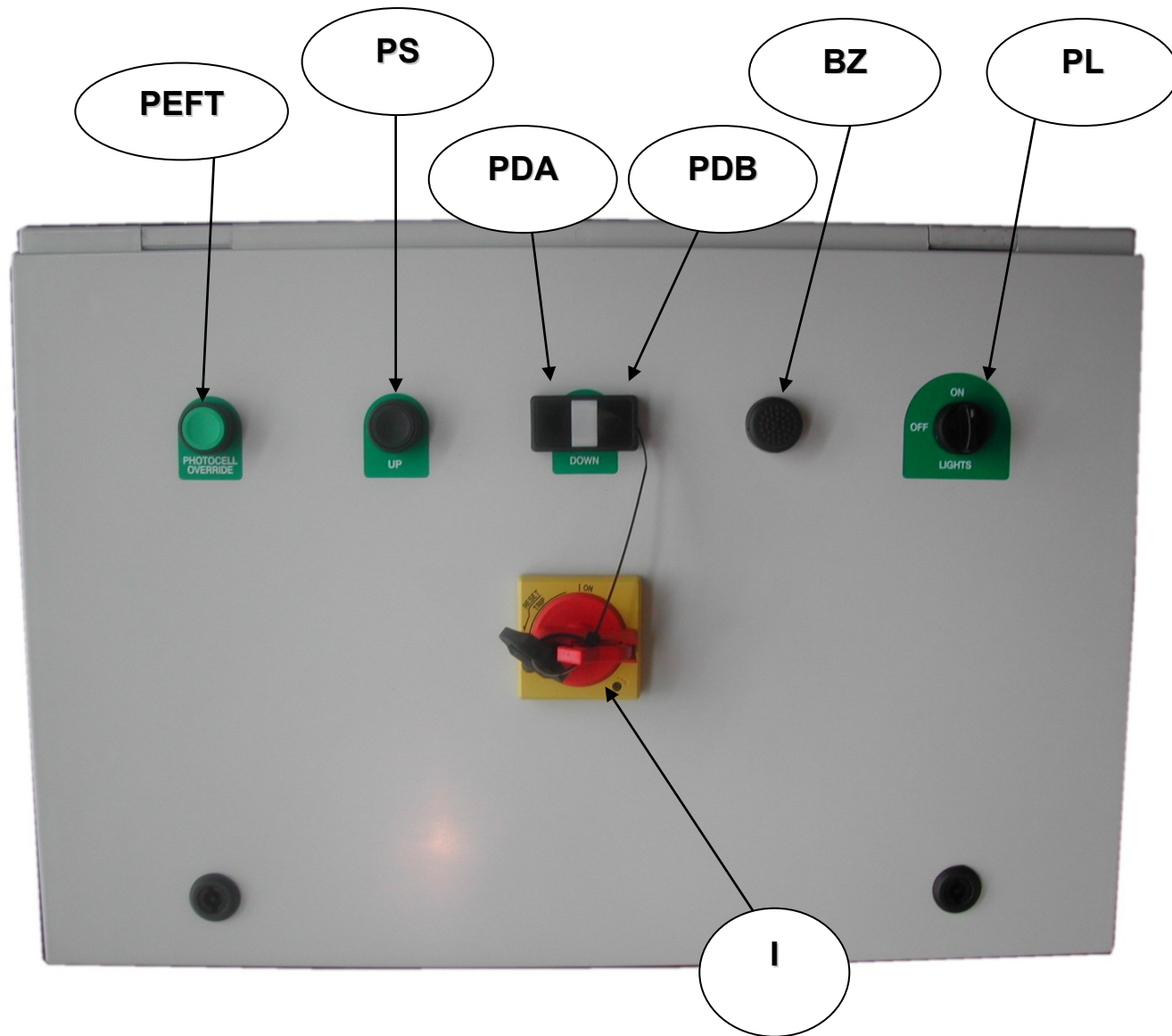
5. USE

Adressees:

- USER;
- OPERATOR / SPECIALISED TECHNICIAN.

5.1. *Operation commands*

I	SYSTEM MAIN SWITCH Activating this switch, the control panel in enable.
PS	TABLE UP BUTTON Activating this switch, the vehicle lift begins lifting.
PDA PDB	TABLE DOWN BUTTON: 1 By pressing the button PDA , the lift: a) Rises a little bit in order to unlock the mechanical locks. b) Starts the lowering. c) Stops when the platform height is about 500 mm from the ground. Press together the buttons PDA e PDB in order to end the last lowering phase ; the buzzer sounds (BZ).
PEFT	CUT-OFF KEY SWITCH PHOTOCELLS: the tables are provided with photocells to check platform synchronisation positioned at the front and rear platform ends. If there is a difference in height of more than 50 mm, the photocells interrupt the electric circuit that powers the control unit (24 Volts). Use the PEFT key to exclude the photocells; in this case, by keeping the PEFT button turned it is also possible to perform the upstroke (PS) and downstroke operations (PD).
BZ	BUZZER
PL	LIGHT SWITCH



5.2. Use advice

We suggest to carry out the following procedure:

PROCEDURE	WHEN	PURPOSE	SEE YOU	
			CHAPTER	PARAGRAPH
Platforms levelling.	Once a week.	To replace the normal outflow of the hydraulic components.	<i>Maintenance</i>	<i>Platforms levelling.</i>
Manual check of the photocells	Once a day	To check the correct functioning of the photocells.	<i>Maintenance</i>	<i>Photocells - (Functioning test)</i>

6. MAINTENANCE

Addressees:

- OPERATOR / SPECIALISED TECHNICIAN.




The lift organs, control and safety devices should be checked periodically by the user to assure ongoing efficiency.
All routine maintenance operation should be performed by trained staff operating in full safety.

6.1. Ordinary/extraordinary maintenance

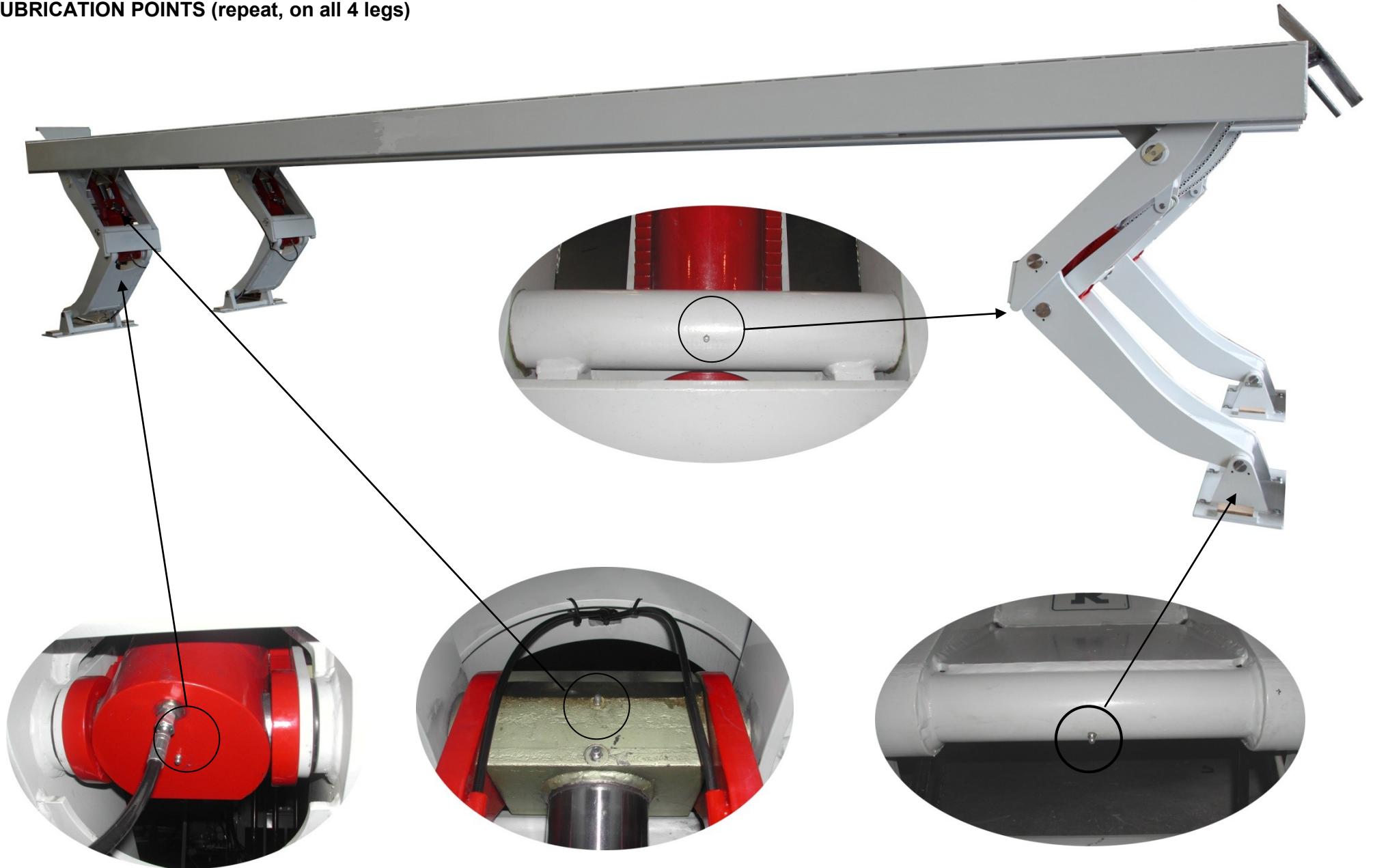
We recommend the following ordinary and extraordinary routine maintenance operations



Note: Before starting any maintenance on the lift, please ensure the lift system has been “lockout / tagout” as per ANSI Z244.1

		WHERE	WHAT	MACHINE STATUS	HOW	TYPE OF GREASE	TYPE OF LUBRICANT
ORDINARY	80 h	UNDER BASE PLATFORM	SLIDERS (PAD)	OFF	GREASE	MOLYCOTE G-4700	
	80 h	PNEUMATIC CIRCUIT	CYLINDER - TUBE CONNECTIONS	IN MOTION	VISUAL INSPECTION		
	80 h	STRUCTURE	PINS AND SUPPORTS	OFF	LUBRICATE GREASE	MOLYCOTE G-4700	
	80 h	HYDRAULIC CIRCUIT	CYLINDER - TUBE CONNECTIONS	IN MOTION	VISUAL INSPECTION		
	3 months	STRUCTURE	PHOTOCELLS	IN MOTION	CHECK OF THE CORRECT WORKING		
EXTRAORDINARY	12 months	HYDRAULIC UNIT	TANK + FILTER	OFF	CHECK CLEAN		
	24 months	HYDRAULIC UNIT	TANK	OFF	OIL CHANGE (if required by the oil dirt)		HYDROIL GF 46
	12 months	STRUCTURE	BUSHES	OFF	CHECK OF THE WEAR		
	12 months	ELECTRIC CIRCUIT	ELECTRIC SECURITIES	IN MOTION	CHECK OF THE CORRECT WORKING		
	12 months	STRUCTURE	SAFETY LOCKS	OFF	INTEGRITY CHECK		

LUBRICATION POINTS (repeat, on all 4 legs)



6.2. Table adjustment procedures

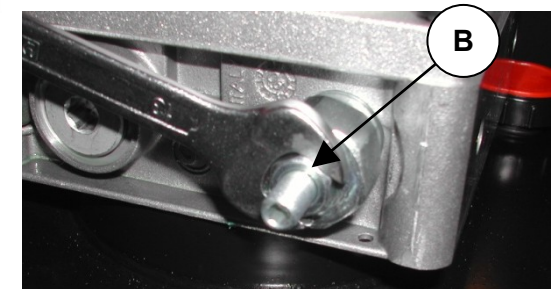
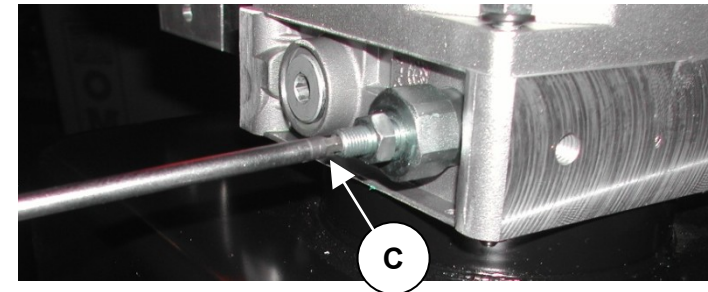
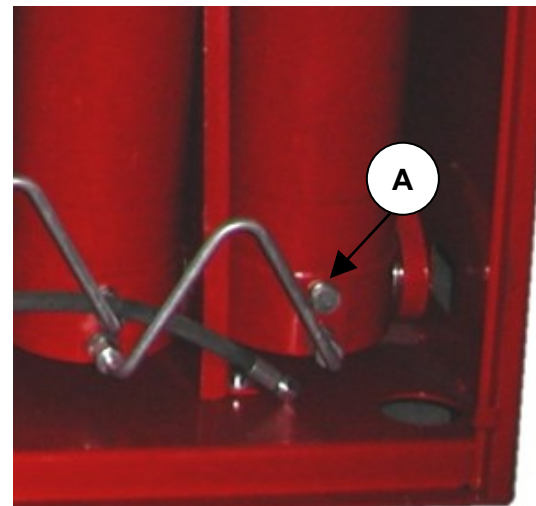
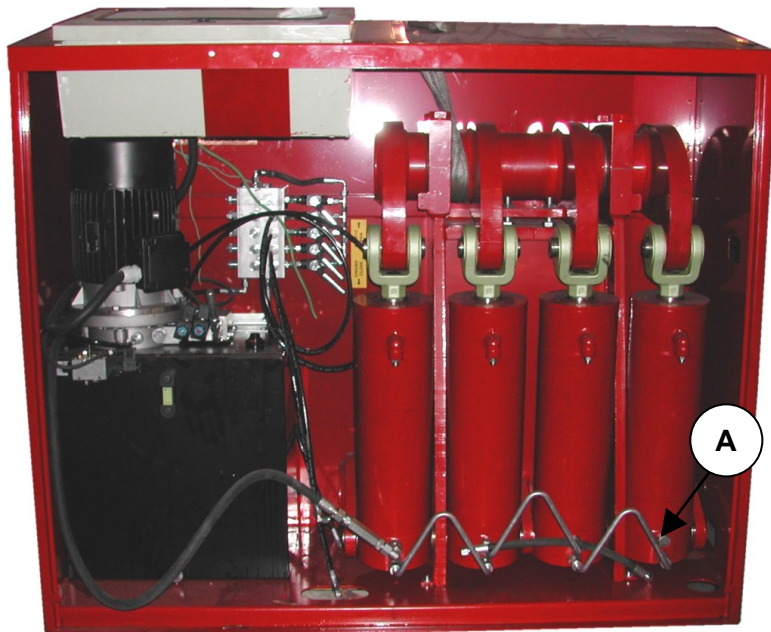
6.2.1. Maximum pressure valve calibration

⚠ WARNING

The calibration of the valve must be executed by specialized people and authorized by the manufacturer. After the calibration the valve must be sealed for example with sealing wax.

- 1) Take the table to maximum height.
- 2) Connect a pressure gauge to the output (part. A)
- 3) Loosen the nut by turning two revolutions anticlockwise (part. B)
- 4) Keeping the up command pressed, check the pressure on the pressure gauge.
- 5) Adjust pressure with a screwdriver: (part. C)
Turn clockwise to increase calibration pressure
Turn anticlockwise to reduce calibration pressure
- 6) When the pressure is equal to **P**, fix the loosened nut at point 3.

PRESSURE	P	KAR140CL	bar	170
			psi	2466
	KAR170CL	bar	190	
		psi	2756	
	KAR190CL	bar	210	
		psi	3046	
KAR230CL	bar	240		
	psi	3481		
KAR290CL	bar	260		
	psi	3771		

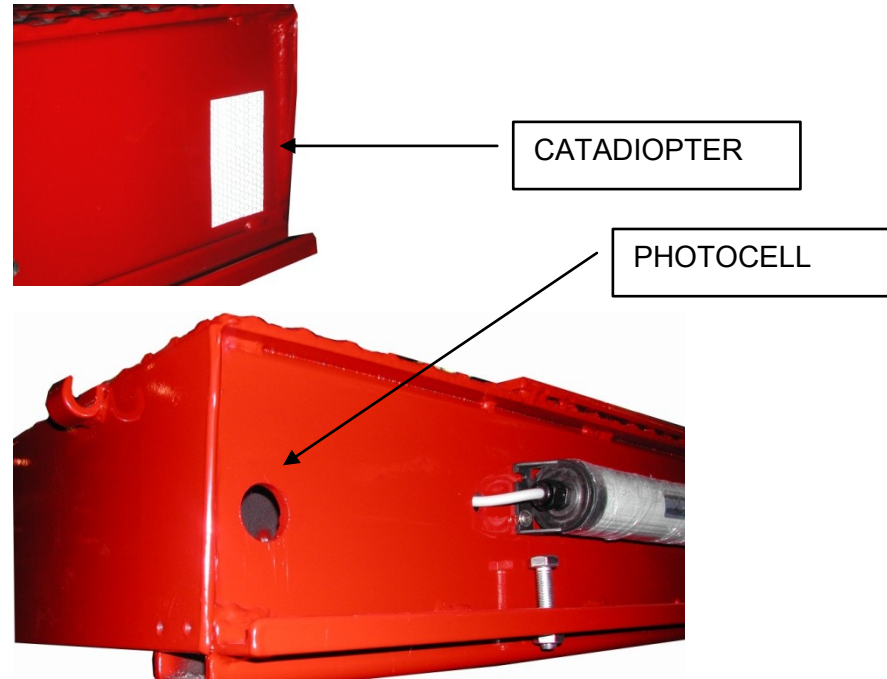


6.2.2. Photocell

6.2.2.1. Alignment



The alignment procedure of the photocells has to be carried out from specialized people and authorized from the manufacturer.



NORMAL STATUS	<ul style="list-style-type: none"> • RED LED ON
STOP STATUS	<ul style="list-style-type: none"> • RED LED OFF
POSITIONING CHECK	<ul style="list-style-type: none"> • with a sheet parallel to the catadioptr move downwards • check when the RED LED is switched off. • mark the position
	<ul style="list-style-type: none"> • with a sheet parallel to the catadioptr move upwards • check when the RED LED is switched off.
	d) mark the position
	e) the work field is between the two marks
	f) the lift's permitted operating field must be $\pm 50\text{mm}$.

6.2.2.2. Functioning test

Interrupt "photocells beam" using a matt object and check:

A	With vehicle lift stopped	The lift can be not activated from the control panel
B	With vehicle lift on the go	The lift movement has to stop

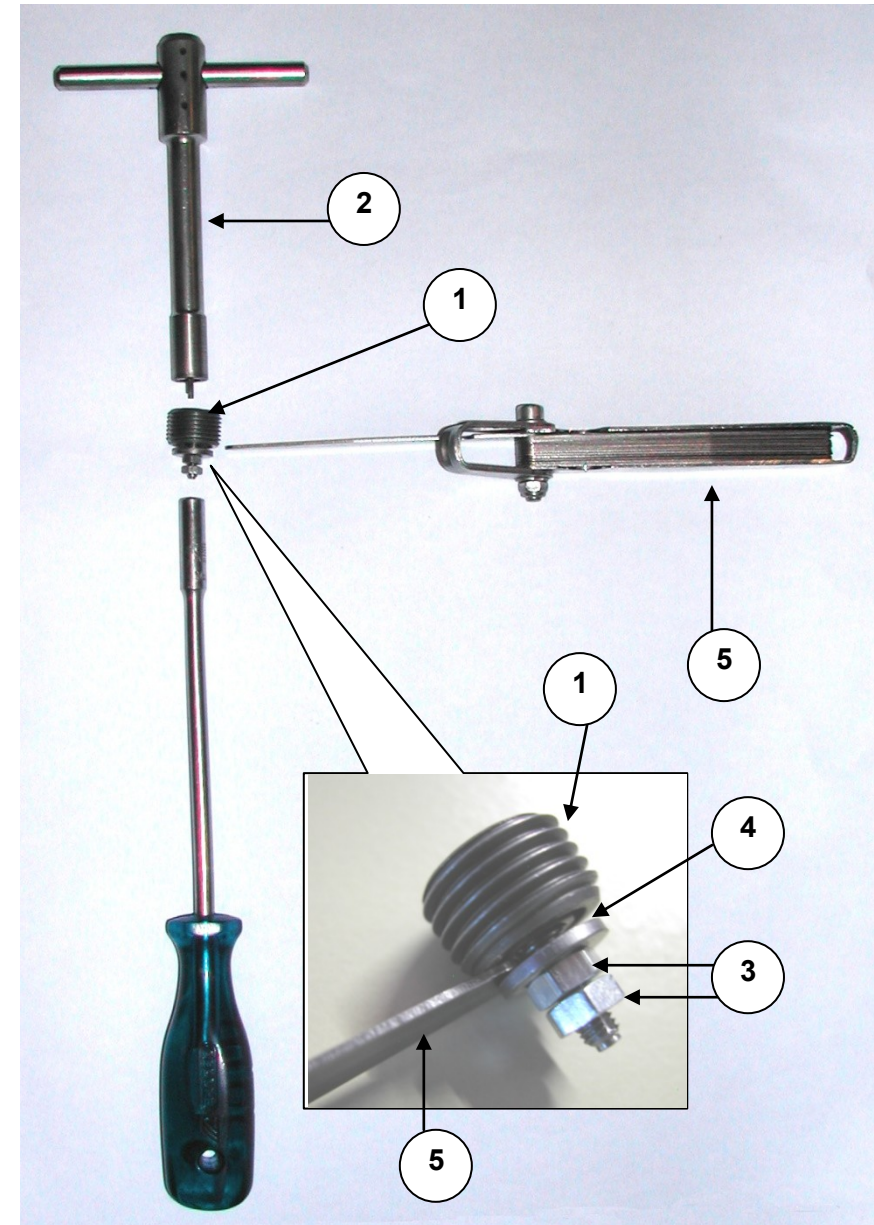
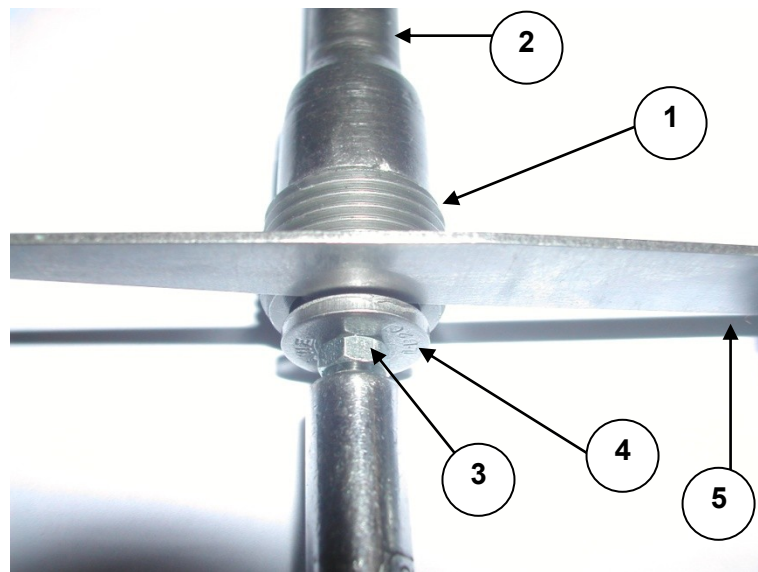
6.2.3. Parachute valve

WARNING

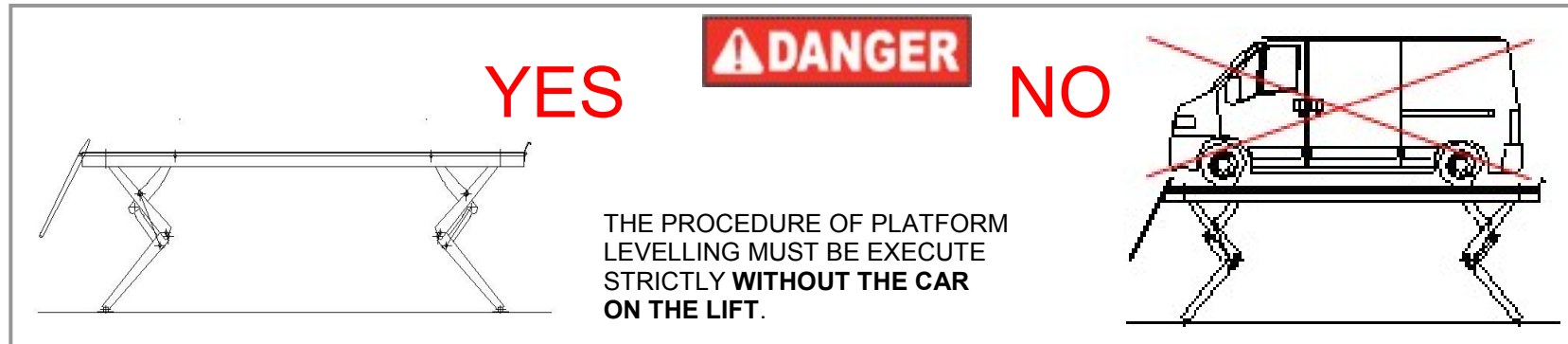
The calibration of the valve must be executed by specialized people and authorized by the manufacturer.

THE CALIBRATION DISTANCES MUST BE ESTABLISHED BY THE MANUFACTURER.

1. Remove the valve (1) on the bottom of the piston using the key provided (2)
2. Loosen the washer and lock nut (3) beneath the valve.
3. Move the plate of the valve (4) closer or further away as desired, checking the height with the dedicated thickness gauge (5).
4. Reassemble and test.

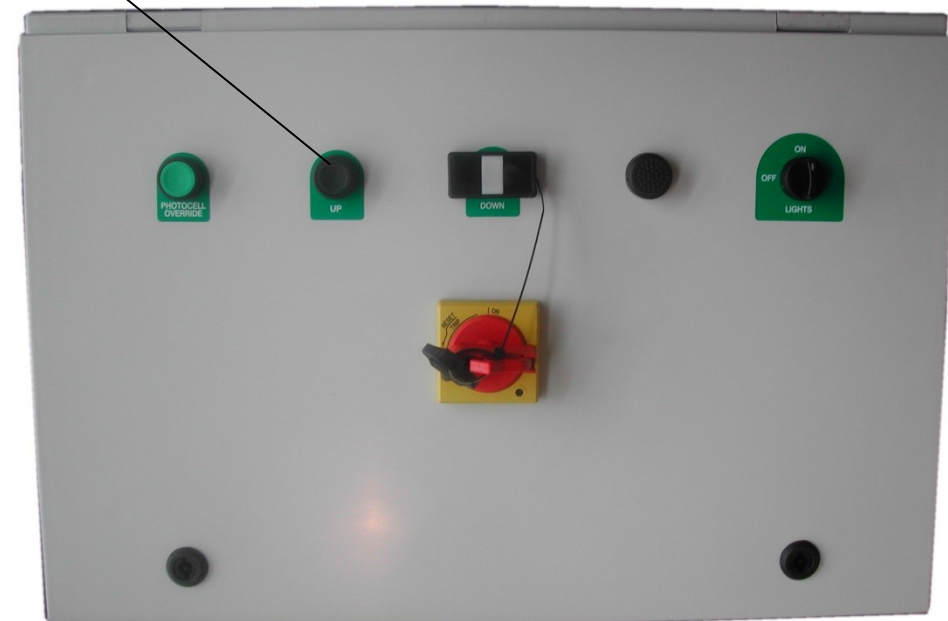


6.2.4. Platforms levelling



PS

- 1 Lift using the bottom of “ upward “ PS till the max high.
- 2 Turn the taps on.
- 3 Push PS/UP
- 4 Turn the taps off



6.2.5. Unblocking safety locks



The “unlocking procedure” has to be carried out from specialized people and authorized from the manufacturer.

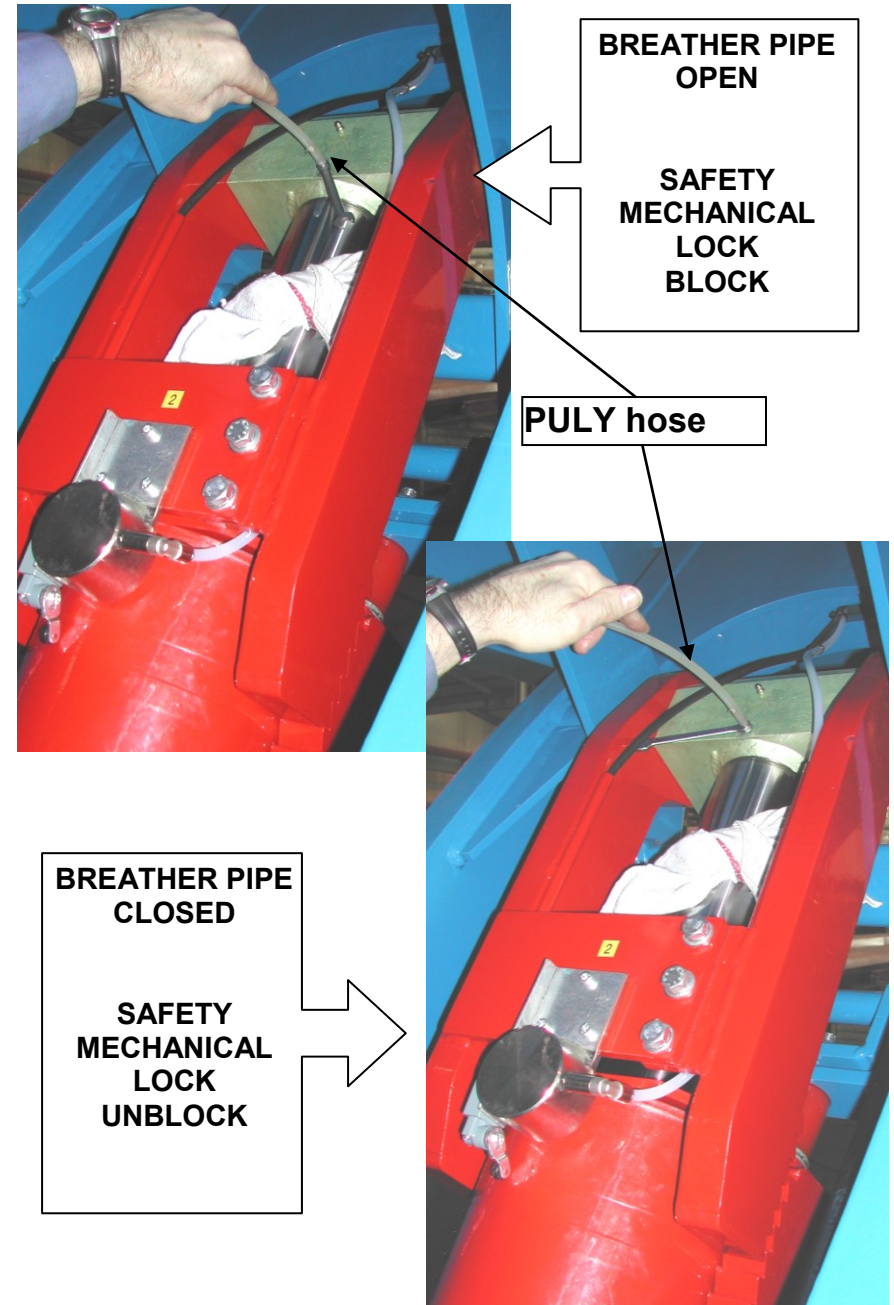
Procedure to be done, when a “safety lock” is in blocking position:

1. Open the feed valve of the slave circuit of the involved cylinder
2. Activate the hand pump till when the “safety lock” is blocked
3. Close the “feed valve” of the slave circuit
4. Lower the lift
5. Discharge the loading
6. Fill the slave circuits.

6.2.6. Bleeding air from the volumetric circuit

To bleed the air from the circuit, proceed as follows:

1. Take the lift to its maximum height;
2. Connect breather pipe of the first slave cylinders to a tank using a flexible PULY hose;
3. Open the breather pipe a little send oil to the volumetric circuit using the dedicated switch.
4. Repeat the procedure for the other 3 cylinders.
5. Close the breather pipe;
6. Lower by about 0.5 m/18”;
7. Repeat this procedure at least 3 times until all the air has been eliminated from the circuit.



6.3. Safety manoeuvres

MANUAL LOWERING WITH HAND PUMP (accessory available on request)

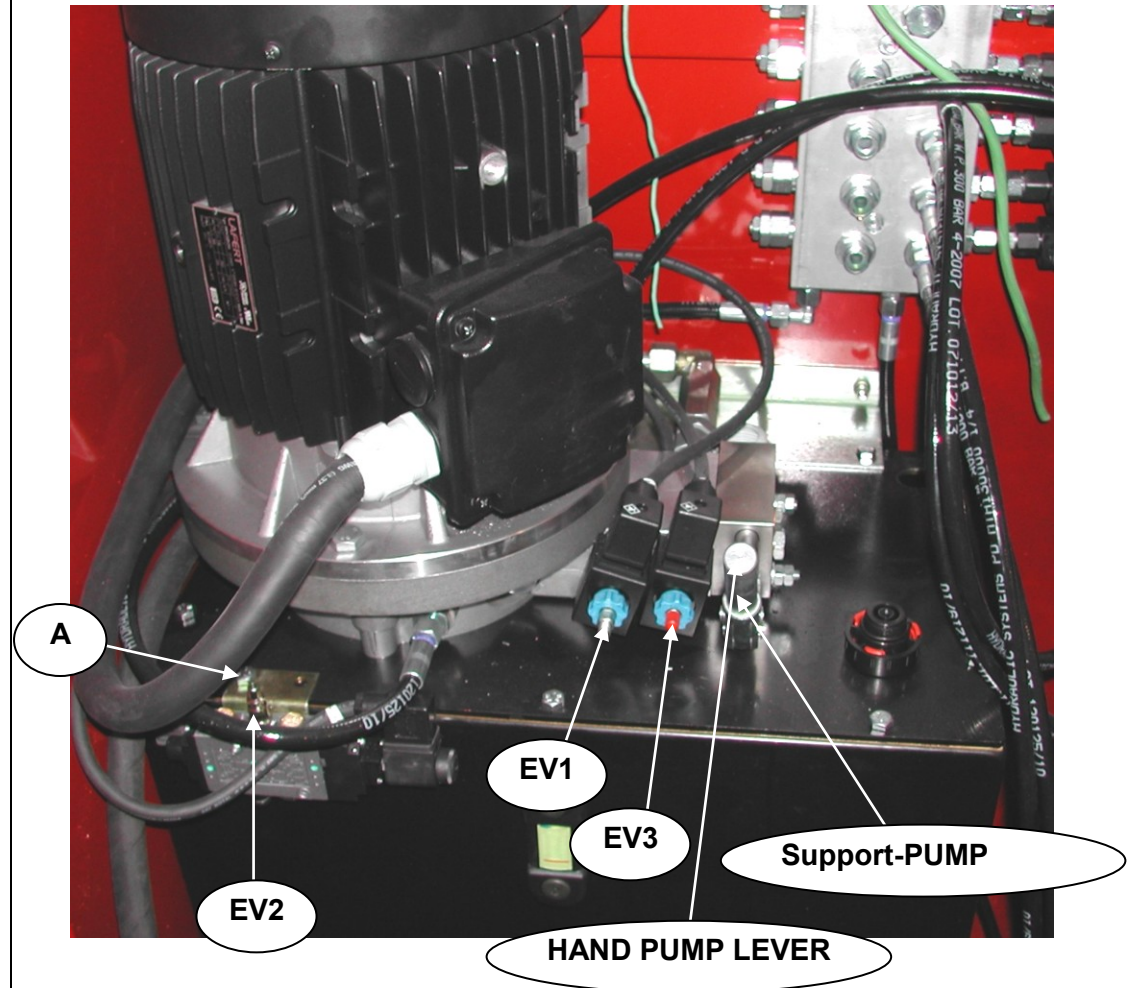
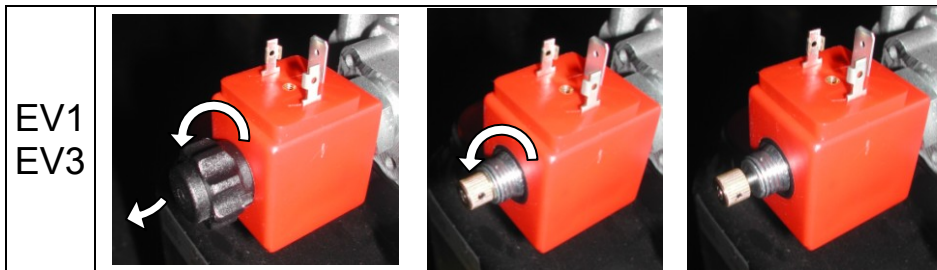


Operations to be performed to lower raised platform with vehicle on in the case of a blackout:

- insert the lever on the dedicated pump support;
- unscrew the lock nut on valve EV3, fully unscrew the knurled pin (see photograph) and allow the table to lower;
- pump until the safety jacks move away from the block position;
- activate jack opening using the dedicated manual valve on solenoid valve EV2 (turn screw **A** through 90°);

ENSURE THAT THE ALL 4 MECHANICAL SAFETY DEVICES ARE OPEN.

- unscrew the lock nut on valve EV1, fully unscrew the knurled pin (see photograph) and allow the table to lower;
- to restore, return the manual command of valve EV2 to its position and tighten the knurled pins.





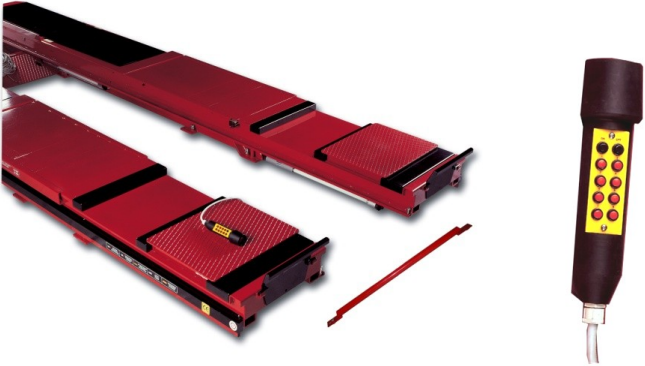
6.4. Abnormal operation

WHAT HAPPENS	WHERE	CHECK
The lift does not rise and the motor does not start	<ul style="list-style-type: none"> a. FUSES b. THERMAL RELAY c. TRANSFORMER d. MOTOR e. CONTACTOR f. PHOTOCELLS 	<ul style="list-style-type: none"> a.1. line fuse blown. a.2. 24-volt fuse blown. b.1. thermal relay tripped, re-cock. c.1. transformer burnt out, does not emit 24 volt. d.1. motor short-circuited or burnt out. e.1. contactor C1 burnt out f.1. photocell fault. f.2. photocells out of reading range
The lift does not rise and the motor starts.	<ul style="list-style-type: none"> a. HYDRAULIC PUMP b. DISCHARGE VALVE c. LIMIT VALVE d. MOTOR 	<ul style="list-style-type: none"> a.1. o-ring seal broken. a.2. key broken. a.3. aspiration tube broken. a.4. clamping screws loose. a.5. check oil leakage. a.6. check the pressure value b.1. EV1 remains open. c.1. limit valve broken. d.1. Check that the motor turns in the direction shown by the arrow.
The lift does not lower and the pressure is normal.	<ul style="list-style-type: none"> a. PHOTOCELLS b. TRANSFORMER c. HYDRAULIC VALVE d. ELECTRIC VALVE e. MECHANICAL SAFETY DEVICES f. AIR VALVE 	<ul style="list-style-type: none"> a.1. photocell fault. a.2. photocells out of reading range b.1. transformer burnt out, does not emit 24 volt. c.1. EV1 blocked. c.2. check the parachute valves on the bottom of the dual effect cylinders. d.1. EV1 24 V coil burnt out. e.1. mechanical safety devices mechanically blocked. f.1. EV2 air blocked (does not open the mechanical safety devices). f.2. EV2 requires power.
The lift rise not levelled	<ul style="list-style-type: none"> a. CYLINDERS b. VALVES 	<ul style="list-style-type: none"> a.1. air in the circuit. a.2. seal wear: SLAVE and/or MASTER b.1. oil leak from the filling valves
Metallic noise	<ul style="list-style-type: none"> a. BUSHING 	<ul style="list-style-type: none"> a.1. bushing wear
Raising intermittently	<ul style="list-style-type: none"> a. PINS 	<ul style="list-style-type: none"> a.1. pins damage



**Replace worn, damaged or broken parts with parts approved
by the original equipment manufacturer
or with parts meeting original manufacturer specifications**

7. ACCESSORIES

CODE	DESCRIPTION	PHOTOGRAPH
4033043500 4033043510	LIGHTING SYSTEM (LED) (only for standalone version)	
	SAFETY BARS	
4023062200	SPD4 P.P.G. for motor vehicles with 4 rectangular movements	
4008190200	T7 JACKING BEAMS Sliding on runways.	